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RS JIM, BUT
NOT AS WE
KNOW IT



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- YOUR CARS • MAD MONDEO
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FIRST WORDS

PERFORMANCE
FORD
OCTOBER 2015 #261

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**PROJECT
VIVA**

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Website: www.performancefordmag.com

ISSN: 0955-0526

Well, what a month this
has been! With all the
shows going on, all the
stuff to do to our cars,
and all the great features to sort
out, it's been manic, but hey, that's
what it's all about, right?

So, what have we got in store for
you this month? Well, first of all
there's our cover story. We wanted
to see what the new Focus ST is
really like, and what better way to
do that than by putting 1,000 miles
on the clock over the course of a
weekend. We subjected it to all
kinds of roads and challenges to
see if it really is the perfect all-
rounder that still packs a punch.
Head to page 14 to see how it did.

We've also got a Mondeo in the
mag, too. Yeah, madness, right?
Well, not really thanks to a

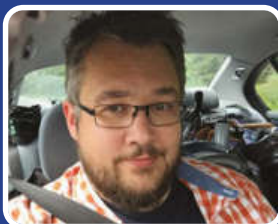
turbocharged 2.5 under the bonnet
with over 300bhp on tap – Ron's
rep-mobile is not a motorway mile-
muncher, it's a proper weapon!

Then there's Scott's Focus RS.
First of all, it's black, which is
unusual for an RS, but we're all for
it. We're also all for the stunning
quality of the build and the power
it puts out, it really is one of the
best out there.

Finally, with a heavy heart we
have to say goodbye to our ad-
selling supremo, Jackie. She's off to
a hotter country to sit in the sun
and drink fancy cocktails, which
makes us jealous. Good luck Jac!

Chris

WHAT CAR DOES THE PF TEAM REGRET SELLING THE MOST?



CHRIS POLLITT EDITOR

1976 3.0S Capri. Sold it
for £1,000. What an
utter mug I was.



JIM BLACKSTOCK CONTRIBUTOR

I gave away a Sierra RS
Cosworth when I was on
REVS. That sucked.



JAMES 'DELTA' BALL EDITORIAL WHIZZKID

More something I didn't buy –
my granddad's 1996 Mondeo
2, perfect condition and ripe
for a few subtle mods.

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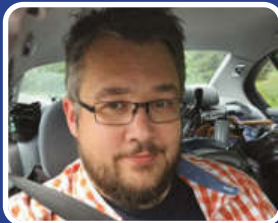
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PULLOUT
POSTER
P58



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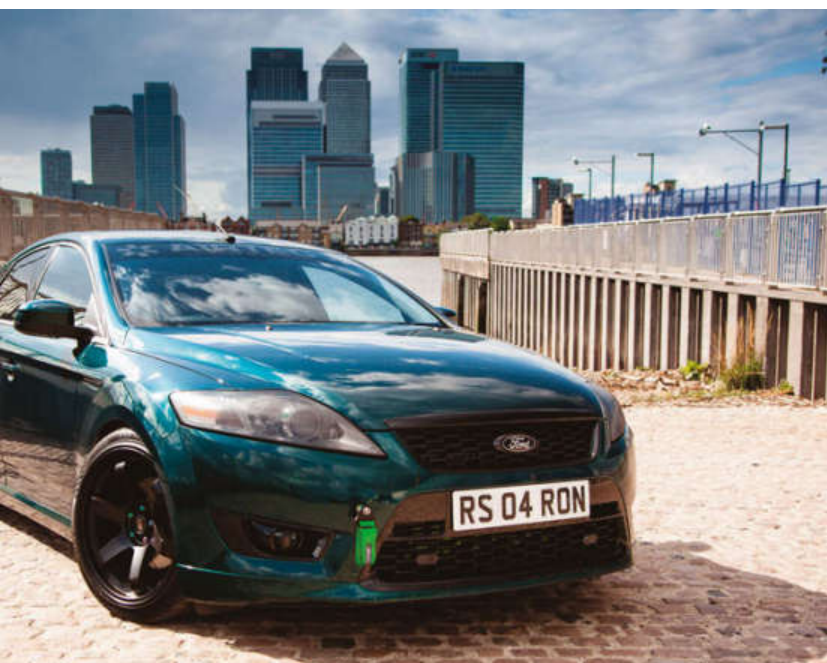
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89 READERS' CARS

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110 MODELLERS CORNER

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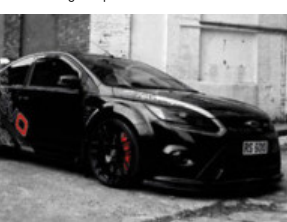
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	Fr Discs (Pair)	Fr Pads (Set)	Fr Discs (Pair)	Fr Pads (Set)	Fr Discs (Pair)	Fr Pads (Set)	Fr Discs (Pair)	Fr Pads (Set)	Fr Discs (Pair)	Fr Pads (Set)
Brakes										
BLACK DIAMOND EBC	£164.48	£104.74	£176.36	£50.32	COMING SOON	COMING SOON	£152.30	£65.48	COMING SOON	COMING SOON
TAROX AP RACING Factory Big Brake Kit	£286.97	COMING SOON	£286.97	£94.80	£286.97	£114.00	£270.00	£90.00	£190.80	£94.80
TAROX Sport/Grande Sport										
BREMBO Gran Turismo										
GOODRIDGE Brake Line Kit										
Suspension	Spring Kits	Suspension Kits	Spring Kits	Suspension Kits	Spring Kits	Suspension Kits	Spring Kits	Suspension Kits	Spring Kits	Suspension Kits
KW	-	£1,052.00	-	£1,008.00	-	£1,050.00	-	£876.00	-	£750.00
ST	£165.00	£725.00	£165.00	-	£165.00	COMING SOON	£135.00	£625.00	£135.00	£625.00
AP	-	-	£164.00	£545.00	-	-	-	£515.00	-	-
EIBACH	£220.00	-	£189.00	-	£187.00	-	£178.00	-	£178.00	-
SPAX	-	-	-	£675.00	-	-	£130.00	£629.99	£169.99	-
BILSTEIN	-	-	-	£772.22	-	-	-	-	-	£720.68
Air Filters	Panel	Induction Kits	Panel	Induction Kits	Panel	Induction Kits	Panel	Induction Kits	Panel	Induction Kits
K&N PIPERCROSS GREEN	£46.79	£152.39	£39.59	£205.19	£46.79	£152.39	£33.59	£169.19	£38.39	COMING SOON
	£49.98	-	£35.99	-	£49.98	COMING SOON	£29.98	£80.22	COMING SOON	COMING SOON
	£60.00	-	£45.97	-	£58.27	COMING SOON	£43.58	£84.22	COMING SOON	COMING SOON
Exhausts	Back Box	System	Back Box	System	Back Box	System	Back Box	System	Back Box	System
MILLTEK	-	£682.54	-	£498.98	-	£778.40	-	£356.76	-	£448.01
SCORPION	-	£558.14	-	£441.00	-	£692.10	-	£351.00	-	£449.10
PIPER	-	-	-	£430.56	-	COMING SOON	-	£323.44	-	£455.52
MONGOOSE	-	£480.37	-	£456.29	-	COMING SOON	-	£361.54	-	£463.06
Engine Bay										
SAMCO Hose Kit	£137.22		£202.15		COMING SOON		£75.54		COMING SOON	
SUPERCHIPS Bluefin	£399.00		£399.00		£399.00		£249.00		£399.00	
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I, ROBOCAR

Autonomous vehicles may still be a way down the road, but drivers across Europe are showing an increasing appetite for semi-autonomous technologies, according to a new Ford Motor Company study on buying trends in Europe.

The study showed significant increases in the number of cars with technologies that help drivers to park, avoid collisions, and maintain set speeds and distances from vehicles ahead.

"Whilst manufacturers including Ford are working toward autonomous vehicles, our customers are already embracing many of the smart technologies that make driving and parking easier and safer," said Roelant de Waard, vice president, Marketing, Sales and Service, Ford of Europe. "We are seeing increasing demand for features that relieve the stresses of driving, and make it more enjoyable."



FLYING THE FORD FLAG

Ford was well represented at this year's CarFest South.

Its newest Transit – a 2015 Custom Sport Van painted gold to mark the half-century – joined the Ford convoy behind the 1994 Super Van, an enduring favourite from Ford's heritage collection, capable of

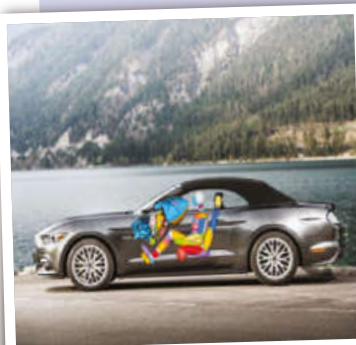
150mph thanks to its 295 horsepower supercharged Ford Cosworth Pro Sports 3000 engine. Another 50-year old icon, the Ford Mustang headed the convoy, celebrating its UK arrival.



YOUNG'UNS GET DRIVING!

Ford is offering its free young driver training programme for the third year running in the UK.

Drivers aged 18-24 can now sign up for the DSFL training at London's Excel Exhibition Centre on the 20th, 21st and 22nd November ahead of National Road Safety Week (23-27th November.) Andy Barratt, chairman and managing director, Ford of Britain, said: "Our Driving Skills for Life programme has been running in the UK for three years now - we're proud that it helps young drivers gain experience behind the wheel in a safe and fun environment."



KNEED FOR SAFETY

Although perhaps not the first thing we might think about when it comes to the all-new Ford Mustang, it is the first vehicle to be equipped with a new type of knee airbag.

This new safety device is integrated within the lid of the glove box, instead of the instrument panel, preserving maximum passenger space.

"This is a new way of thinking about airbags. We went back to the drawing board and in the course of a year went through hundreds of prototypes to get it just right," said Ford restraints manager, Sean West. "With this design we were able to save on space, weight and components."

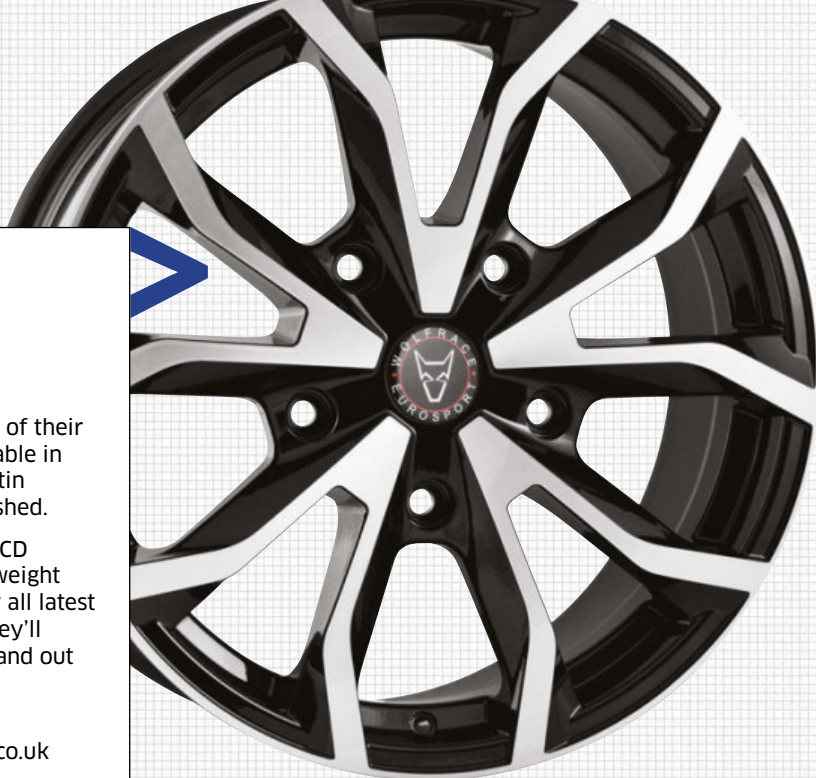
WOLF RACE TRANSIT WHEELS

The Wolf Race wheels are part of their Eurosport range and are available in either gloss black/polished, satin black/white or satin grey/polished.

Specification is size 8.0x18", PCD 5x160, offset 50 and it has a weight load of 1350kg. A direct fit for all latest generation of Ford Transits, they'll certainly make your Transit stand out from the crowd!

Cost: See website

Contact: www.demon-tweeks.co.uk

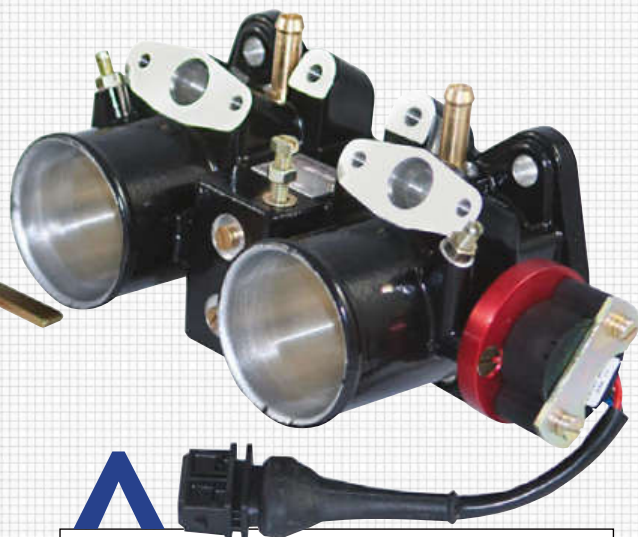


MSD BLASTER COIL FROM BURTONS

Burton Power is now stocking products from the leading American ignition company, MSD. If you are looking to upgrade your stock coil or want to complement the performance of your MSD Blaster Ignition, MSD 5, 6 or 7, the Blaster Coil line is the one you need. Discounts are available if purchased on-line from the Burton Power website.

Cost: £59.00 Inc. VAT

Contact: www.burtonpower.com



WEBCON ALPHA THROTTLE BODIES

With Electronic Fuel Injection more or less replacing carburettors, Webcon are launching what they call "the next generation in throttle bodies", and they certainly look the part.

These Alpha throttle bodies have been proven in all levels of motorsport, from amateur trackdays to the cut-and-thrust of professional touring car series. Each throttle body has been hand-assembled by experienced Webcon engineers and 100% flow tested during the manufacturing process as well as prior to delivery.

They are compatible with almost all twin DCOE style manifolds and are able to accept both conventional Pintle injectors as well as the newer Pico style.

Cost: 9990120400 45mm Slave body
£238.70 Ex. VAT

9990120700 45mm TPS body £275.00 Ex. VAT

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CTEK CHARGER FROM DEMON TWEETS

This CTEK CT5 charger is designed for the new generation START/STOP vehicles. To ensure the vehicle's START/STOP function operates effectively to deliver maximum fuel efficiency and minimum environmental impact, the battery has to be properly charged and maintained. This also maximizes battery lifetime and gives optimal reliability - avoiding unexpected and costly replacements.

The CTEK Start Stop Battery Charger and Maintainer is described as a simple to use charger with an easy to understand display - we like simple! It is non-sparking, reverse polarity protected and short-circuit proof, and comes with a 5-year warranty, too.

Cost: £79.16

Contact: www.demon-tweeks.co.uk

PIPER CAMS ECOBOOST RANGE

Ford EcoBoost cams and uprated valve spring kits have now been added to the wide range of performance products available from Piper Cams. They have applications for the Fiesta ST180 1.6 engine and Focus ST250 2.0 engine.

Profiles are available from fast road up to race spec and they can even make custom grinds to order if you are after something more bespoke. The valve spring kits include retainers to suit and are designed to work in performance engines.

Cost: from £560.00 +VAT for cams and £122.00 +VAT for springs

Contact: www.pipercams.co.uk

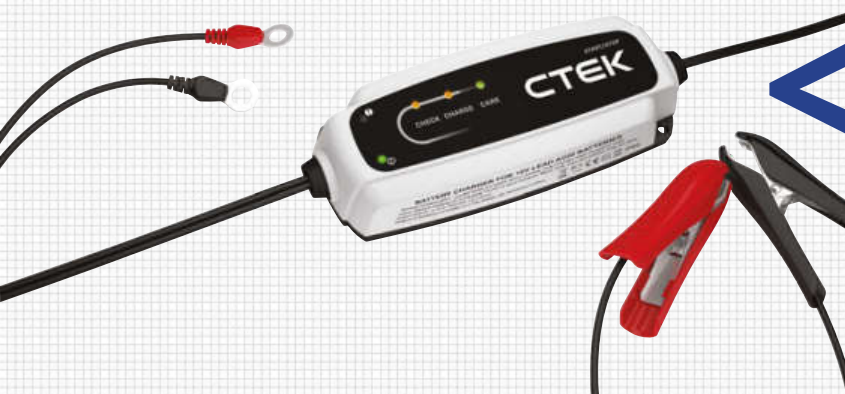
POWERFLEX ENGINE MOUNT

Powerflex have just released two new engine-mounting bushes for the Ford Fiesta Mk6 and Mk7 (ST). The PFF19-2001 Front Lower Engine Mounting Bush with inserts is a replacement bush kit that also includes inserts to fit into voids in the bush, making adjustment of engine movement possible.

This upgrade is perfect for stiffening engine mounts ahead of track days and performance events and returning them to a 'comfort' setting for day-to-day road use. This part fits vehicles with a 30mm mounting bracket. For vehicles with a 25mm wide bracket, you'll need Powerflex's part number PFF19-2003.

Cost: PFF19-2001 £36.48 Inc. VAT
PFF19-2003. Retail price £36.48 Inc. VAT

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WHAT'S ON



26-27TH SEPTEMBER

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You'll always get great action at a touring car race, but the National Circuit's short straights and tight corners make for several overtaking opportunities on every lap. Everyone will be jostling for the strongest possible position going into the unpredictable season finale a few weeks later. Race day tickets are £25.

CONTACT: www.silverstone.co.uk



20-22ND NOVEMBER

FORD DRIVING SKILLS FOR LIFE

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WALES RALLY GB



12-15TH NOVEMBER

The final round of the FIA World Rally Championship is not one to be missed! Wales Rally is shaping up to

be a great event, and one which will honour Colin McRae.

It will be exactly two decades previously that on Wednesday 22 November the legendary Scot won Britain's concluding round of the 1995 FIA World Rally Championship - then the Network Q RAC Rally - to make motor sport history. It's an historic milestone that will be honoured with a number of special displays and parades at the 2015 event. Tickets start at £27 for a Friday pass, and £101 for four-day access.

CONTACT: www.walesrallygb.co.uk

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24 - 25TH OCTOBER

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The Championship has five classes, for different models of Fiesta, including the latest addition of the Fiesta 1.25. Great to watch and a super-cheap day out, mark this one on your calendar. £14 on the day, £10 in advance.

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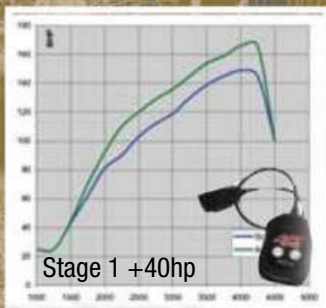
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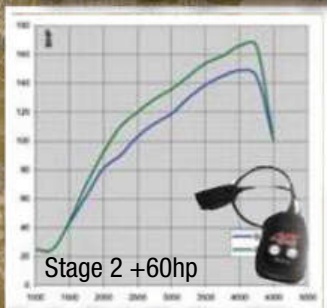
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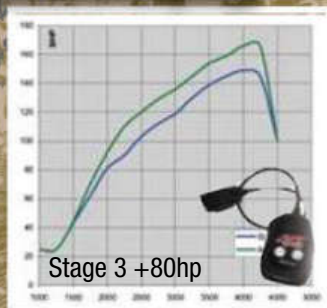
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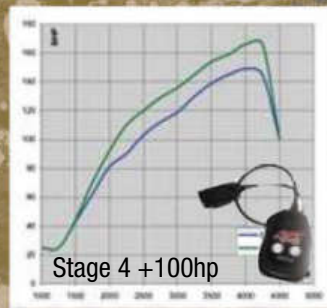
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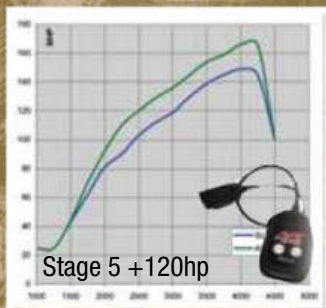
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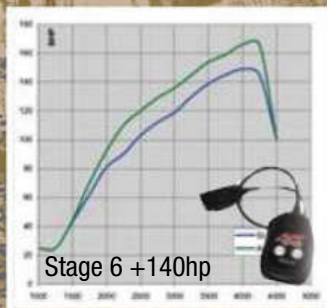
Requires Handset & software, Turbo back exhaust, Intercooler, 550cc injectors, Intake Kit



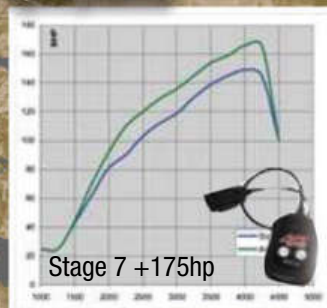
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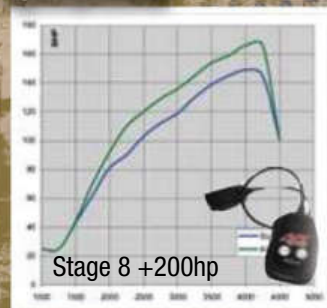
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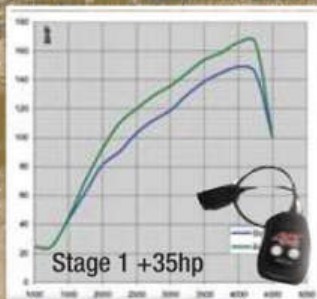
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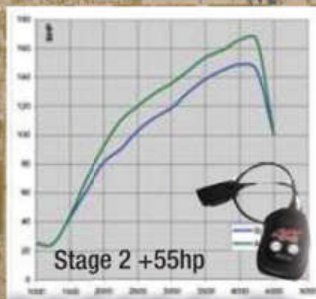
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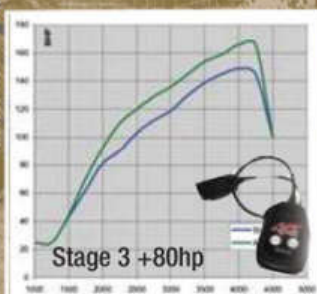
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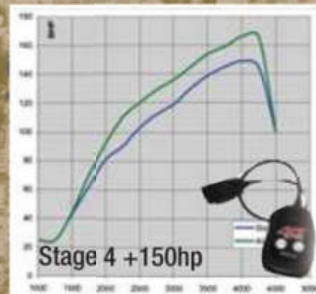
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STAND &

The Focus ST has been around for a while now, so PF wanted to go back and remind everyone why it's such a great all-rounder. A near 900-mile round trip to Knockhill for the BTCC should be a good way to do that...

 CHRIS POLLITT  BRUCE HOLDER

T

The Focus ST has become a staple of performance motoring. It's regarded as the best in its field, a true drivers' car and the perfect base on which a great many of you guys have built incredible machines. It's been a success story from the off, but as is often the way with these things, that success can cloud over the core value of the product as the years go by. Cars, specifically those of performance nature, can become too hard-core and too 'much' in the blind pursuit of being the fastest in the class.



DELIVER

The Focus ST is over 10 years old now, and in that time it's gone from a snarling bruiser to a seemingly more generic 2.0 turbo. Yet its looks and performance have spiked, with the current petrol version now offering 250ps, but is that too much, or has it evolved gracefully? PF wanted to find out, so cap in hand, we went to Ford's Press Office and asked if we could have one for a few days. Shockingly, they said yes. A road trip was in the making.

So what's the point of all this? Well, simply, for many of us, the thought of having a performance Ford has to be

based around one car. Yes, plenty of you have more than one and more power to you for that, but for most, just one car has to fit the bill. It has to be the commuter, the shopping car, the school-run machine, the holiday bus and, of course, the B road blaster. It has to be all things to all men, and that's a big ask for any car, and that's without throwing the performance element into the mix.

As such, we wanted to see where the current Focus ST ranks in terms of its ability to do all that. Would it be worthy of the ST badge, or would the ST specification make it a >



“IT’S REGARDED AS THE BEST IN ITS FIELD, A TRUE DRIVERS’ CAR AND THE PERFECT BASE ON WHICH A GREAT MANY OF YOU GUYS HAVE BUILT INCREDIBLE MACHINES”



nightmare unless being driven within an inch of its life? If you committed to buying one, would you be making any noticeable sacrifices? And most importantly of all, as is the case with any performance Ford, does it feel special and exciting?

THE CAR

When we asked for a Focus ST to play with, Ford pulled out all the stops and sent us a Moondust Silver ST-2 five-door hatch. It came with a wealth of toys, optional 19in alloys, Recaro trim and lots more. Under the bonnet lies the 2.0 EcoBoost turbocharged 250ps engine mated to a six-speed manual transmission. We had camera this, electronic that, touchscreen the other. It was very, very well equipped.

A base ST-2 will come in at around £23k, but this one, with all the toys (which we'll get to later) will run into just over £27k. That might seem expensive, but when you compare it to its peers – the likes of VW, Audi, Mercedes and, urgh, Vauxhall – it's incredibly good value for money. Anyway, this isn't WhatCar?, this is Performance Ford, so let's get to putting some miles on this sucker.

“THAT MIGHT SEEM EXPENSIVE, BUT WHEN YOU COMPARE IT TO ITS PEERS – THE LIKES OF VW, AUDI, MERCEDES AND, URGH, VAUXHALL – IT’S INCREDIBLY GOOD VALUE FOR MONEY”



**“AT THE END OF
THIS, WE’D
EITHER LOVE
THE ST, OR BE
SO SICK OF IT
THAT WE NEVER
WANT TO SEE
ONE AGAIN”**

THE ROUTE

The plan was simple. We had two days to get from glorious Weston-Super-Mare up to Knockhill in Scotland and then back. Why Knockhill? Because the BTCC was on of course, and a near-900 mile round trip is exactly the kind of thing you’d regularly undertake in your car, right? Well, that was our justification.

The plan was to get up to the Lake District, find some delicious roads to have some fun on, then go and see a race, then head back. Simple stuff really, and a journey with a little bit of everything thrown into it. We wanted to see if buying a performance Ford came with any sacrifice, and doing all that mileage through different environments in a condensed timeframe would be the perfect way to find out. At the end of this, we’d either love the ST, or be so sick of it that we never want to see one again. ➤



HOW IT WENT

Once we'd gotten over the initial period of hanging onto every gear (this sucker is fast) and pressing every button on the dash, we got down to the serious business of road testing. Yes. Serious.

Let's get the necessary out of the way first: motorways. Look, we know, it's not the most exciting topic. However, it is where your car spends a great deal of its time. If the ST failed here, we'd be in trouble, as most of our journey was set to be on the three-lane black-top.

Thankfully, we can report that despite the 19in alloys, despite the firm Recaros and despite the sports suspension, the ST is actually a joy on the motorway. More than that, it's effortless. Rack up 400 miles in this and you'll get out feeling as refreshed as when you got in. It's not hard, it's not jarring – no element of the ride has been sacrificed in

the name of performance. It's comfy, smooth and relaxing. So there, that's that out of the way. We can tick that box.

Before we move on to the important stuff, namely our jaunt through The Lakes, it's worth pointing out a couple of toys that our car had that we'd recommend.

First of all, there's the lane guidance system. This, quite simply, BLEW OUR LITTLE MINDS. Turn it on by jabbing the button on the left-hand stalk three times and you're away. The car 'sees' the lane by looking for the white lines, then two lines beside a little icon on the dash turn green – you're off. Now, if you wander out of the lane, the steering wheel gently nudges you back on the right track. Clever stuff. If it has to do it a number of times, it tells you to pull over and have a coffee – you're clearly tired. Bless it, it cares about us! That, or it just doesn't want to skew off the



motorway while you catch some zs. Understandable really.

The other thing we loved was the blind-spot radar thingy (yes, this is serious road testing). Basically, a little orange light in the wing mirrors that comes on when there's a car in your blind-spot. Simple, clever and effective.

It's obviously got lots more kit besides, such as Bluetooth, hands-free, touch-screen stereo, air-con, yada yada, which were all great. But for us, the two mentioned above were the stars of the show. Anyway, this is turning into WhatCar? so let's pull off the motorway and give this sucker some stick.

Sweet. Baby. Cheeses. This thing is immense, utterly, utterly immense. We've got a 2005 ST in the garage, and by comparison it now looks like the Flintstone's car. This latest incarnation is electric to drive, and on the twisting A and B roads of Cumbria it was perfectly in its element. >

“SWEET. BABY. CHEESES. THIS THING IS IMMENSE, UTTERLY, UTTERLY IMMENSE. WE’VE GOT A 2005 ST IN THE GARAGE, AND BY COMPARISON IT NOW LOOKS LIKE THE FLINTSTONE’S CAR”



First of all we'll address the elephant in the room that always comes up when talking about a fast, hot hatch – torque steer. Yes, the STs and RSs of old have all suffered from it, but in this, not so much. The traction control allows a little bit of slip when it thinks it's okay to do so, but other than that it pulls straight and true. There's not even any noticeable 'fight' through the steering, even when addressing tight or sudden crests during which the weight of the car is shifted. Not that we'd suggest you try, but you really would have to work hard to crash this thing.

Yes, you can turn the aids off, but honestly? You're just making work for yourself. Just leave them on and let the car do its thing, it won't hinder the driving experience at all, we promise you.

The power is seemingly endless care of minimal turbo lag and 345nm of torque, the latter of which is available at 2,000rpm. Add into the mix Ford's ETV (that's Electronic Torque Vectoring Control, folks) that makes sure the torque split over the front wheels is bob on and you're onto a winner. And, of course, let's not forget that most favourable mainstay of the Focus – the switchblade independent rear suspension.

In terms of bringing it all to a stop, the brakes are phenomenal. They do take a bit of getting used to, as they can be a bit sudden, but once that learning curve has been dealt with, you're left with a car that inspires confidence care of its abilities.

Frankly, the ST gives the old RS a run for its money as far as we're concerned. The speed difference is, in the real world, negligible and while the RS of old was a revolution in terms of what can be done with a FWD chassis, the new ST is a honed gem of fine-tuning and developing what was learned.



“YES, YOU CAN TURN THE AIDS OFF, BUT HONESTLY? YOU’RE JUST MAKING WORK FOR YOURSELF. JUST LEAVE THEM ON AND LET THE CAR DO ITS THING, IT WON’T HINDER THE DRIVING EXPERIENCE AT ALL, WE PROMISE YOU”

The only drawbacks? Well, it's a modern car and for some, that's never going to cut it. It is very 'Dixons' inside with all its gadgets and buttons and lights, but that's par for the course with a modern car, surely? Plus, if you're not interested in the most modern of cars, you probably won't be reading this!

Other issues? It's not great on fuel - we averaged 31.2mpg over the whole trip and, apart from in The Lakes, we weren't exactly giving it hell. But, that's a sacrifice you're going to be more than aware of when looking into a car like this. Plus, if it's really important to save on the MPGs, there is a diesel version. ➤



Finally, in the negative column – and this might just be us – it's the uncertainty of modern car systems. For example, we remain convinced that NOBODY has invented an automatic wiper system that works. Secondly, things like the 'check tyre pressure' warning coming on, and then going off, et al. These are not concerns we've ever had in the past – it's like the car is giving us something to worry about. It's annoying, Ford. Stop it.

CONCLUSION

After some racing at Knockhill, some photos under the Forth Railway Bridge and a 400-mile drive home, we can conclude that the Focus ST is an amazing, if thirsty, bit of kit. You get the honest impression that the performance element has been brought into this car without sacrifice, it wasn't a case of trying to fit it all in around the core values of a mum-spec Focus 1.0. Basically, it's not a gimmick, it's a proper, well-thought-out, well-made, well-engineered performance car. It really is the perfect all-rounder, and while the flashy lights and clever steering were fun, they're not options you need to have. You can get an ST-1 – that will still be as much fun to drive – for, as we said, around the £23,000. In fact, that version would probably be fractionally more fun, as it's on the 18in alloys, not the arch-consuming 19in ones. All the kids might think they're 'well sick' on their zero profile rubber, but really, a bit of tyre wall is a nice thing to play with on the twisty stuff.

The other thing we were left with was the thought that as it stands, the newest ST has more than enough going for it to keep you entertained until the serious modification can start. For some, the thought of invalidating the warranty in the name of more grunt is no issue, but for those of you who want the peace of mind that comes with dealer cover, you won't be left with a car that bores you after a few

years. Plus, you can always have Mountune throw another 25 or so bhp at it without the supplying dealer having a hissy fit.

And therein lies the point of this test. Can a 'standard' performance Ford deliver what we, as enthusiasts, want from it? In short, yes. Ford already proved that with the Fiesta ST and with its bigger brother, they've just driven that point home even further. The rivals can't, in our eyes, say the same. But hey, we're Blue Oval through and through, so we would say that! 📍



**“WE CAN CONCLUDE
THAT THE FOCUS ST IS
AN AMAZING, IF
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For tickets visit www.performancefordmag.com/trackday



BACK IN BLACK

It might look like a beauty queen with its unusual black hue, but trust us when we say this monster Focus RS hasn't been built to be polished – it's been built to be driven... hard!

 CHRIS POLLITT



G

Grabbing a Sharpie and drawing a moustache on the Mona Lisa, making Rachel Riley wear baggy clothes or putting lime in a pint – these are all acts of lunacy, lunacy that shouldn't be tolerated in any way, shape or form. Painting a Focus RS a colour that really, deep down, we all sort of wish it was available in to begin with, that's an inspired act, that's the brave move of a man who wants to see a vision through. Admittedly it's not to everyone's taste, but hey, their name isn't on the V5, so it's not up to them!

In this particular case, that man with the vision is Scott Hignett, and while some may say he's committed a sin by painting a Focus RS black, we say fair play. We also go a bit weak at the knees due to the spec – nearly 400bhp is being

punched out of that 2.0 turbo. But again, we know what you're thinking. You're probably confident that this shiny, immaculate car is going to be nothing but a show queen, what with all its shiny bits and bronze wheels and deep, reflective, pretty-much-perfect paint. You're wrong though, >

“THAT MAN WITH THE VISION IS SCOTT HIGNETT, AND WHILE SOME MAY SAY HE'S COMMITTED A SIN BY PAINTING A FOCUS RS BLACK, WE SAY FAIR PLAY”





because that's not the case. In fact, that's a million miles from the case. To such an extent that PF had to hightail it up to Stockport to get the car shot because Scott was champing at the bit to give it some abuse, he just didn't want to hurt it before it got featured. Oh yeah, this car has been built to be used.

Scott is no stranger to tinkering with desirable Fords. A quick glance into his workshop during the shoot drove that fact home: care of a Sierra RS Cosworth, a new RS, a Mk1 XR2 and others, some his, some belonging to customers, all have been worked on by Scott at some point. Like many of us, he lives and breathes this stuff, so when it came time to build his own car, there was no way it was going to be anything less than spectacular.

The RS's journey with Scott began around two years ago, while the car was still pretty much just a standard Focus RS. While the specifics of the new mechanicals were yet to be finalised, there was one thing that was pretty much set in place in Scott's mind, and that was the colour. It had to be black, nothing else would do.

Now this isn't the first time we've featured a Mk1 Focus RS that's been painted a different colour. Those of you with a good memory may recall the pink one we featured a few years ago, or the Frozen White track animal that was on the cover many moons ago. Basically, the point is that painting an RS a different colour isn't a new thing. However, the cars we just mentioned were painted to meet personal preference, and while there's a degree of that with Scott's car, it's not the main motivator behind sanding the blue off. Scott went for black because he stands by the opinion that it's a colour that the RS should have always been available in. >

“THERE WAS ONE THING THAT WAS PRETTY MUCH SET IN PLACE IN SCOTT'S MIND, AND THAT WAS THE COLOUR. IT HAD TO BE BLACK, NOTHING ELSE WOULD DO”







TECH SPEC

ENGINE:

Focus RS 2.0, hybrid turbo, K&N air filter with cold air feed, full Scorpion exhaust, de-cat, fully heat-wrapped, ceramic-coated exhaust manifold, RC 660 fuel injectors, Bosch fuel pump, Forge recirculating valve, AirTec radiator, ProAlloy intercooler, Samco hoses, Demon Performance re-map to 390bhp, carbon fibre engine cover with build number imprinted

TRANSMISSION:

Billet alloy short shift gear selector, AP Racing organic clutch

SUSPENSION:

AST coilover suspension all round, adjustable top mounts, fully polybushed throughout, OMP upper and lower front strut braces, fully adjustable rear lower and upper track arms

BRAKES:

AP Racing 4-pot front calipers with gold bells and hangers, 365mm rotors, Reyland big brake conversion on the rear with gold bells and 315mm rotors, Wilwood callipers

WHEELS & TYRES:

18x9 Team Dynamics 1.2 alloys in bronze, with Toyo R888 235/40 R18 tyres

INTERIOR:

Dash-mounted OBD data screen, re-trimmed original steering wheel in black alcantara

EXTERIOR:

Full bare shell re-spray in black, carbon fibre front splitter and bumper vents, carbon fibre door sill covers with build number imprinted



With such belief as his motivator, and with an urge to prove his point, Scott has ensured the paint job is the real deal, not just a quick blow over or wrap. This is a full bare metal re-spray, with everything being covered in a layer of rich, deep, black paint. No panel, shut or gap has been left unexposed – much like Scott wanted, the finish looks factory.

At this stage Scott could have built the car back up to standard condition, using it as a tool to show just what his vision of the factory Focus RS is. He didn't though, because that'd be really boring. Instead, he hoofed a load of performance goodies into it in a bid to make it into a motorised monster.

Working with a bare shell, it was easy to start as he meant to go on. Suspension has been addressed with adjustable everything. AST coilovers, top mounts, upper and lower control arms all round – this car can be setup to within an inch of its life! Throw in a full complement of polyurethane bushes along with upper and lower OMP strut braces and you're left with a chassis that can handle anything.

All very nice so far, but a tight chassis is nothing without an engine to give it a workout. The RS lump has gone back in, complete with black and carbon fibre detailing to make sure it's in keeping with the car's new look. There aren't just visual changes though, oh hell no. There's a ceramic coated manifold, a bigger intercooler and rad, a hybrid turbo and, of course, an all-important remap taking this sucker up to a legitimate 390bhp. Needless to say, the Focus is no slouch.

If you do find yourself in a situation where it's not traveling at 'ludicrous speed', there's a lot more for your eyes to drink in. Things like the bronze, NOT GOLD, Team Dynamics alloys wrapped in Toyo R888 rubber for maximum stickiness. You may also spot the massive 356mm front brakes, complete with AP Racing four-pot callipers, or maybe you'll see the Reyland big brake conversion on the rear?

Get up really close and you'll see all manner of well thought out and beautifully applied details. The custom engine cover and sill plates aren't just for show, they're

“THERE HASN'T BEEN ONE MOMENT OF EXCESS, THERE IS NO WEAK ADDRESSING OF ANOTHER ASPECT OF THE CAR”

also emblazoned with the build number of this RS, it's a nice detail that will further annoy the purists – the build number confirms the genuine RS status after all.

Inside you'll see the black alcantara steering wheel, the original seats that offer a subtle nod back to the car's origins, or maybe the OBD data screen. That's all though, there's nothing over the top or untoward – this is a cockpit that is there to encapsulate the driver and make sure they stay focused on the task at hand – driving this thing hard.

Everything has been addressed on this RS. There hasn't been one moment of excess, there is no weak addressing of another aspect of the car – the brakes, suspension, engine, the tyres, they're all on an even playing field in terms of ability and performance. This car is the full package from bumper to bumper, it's honestly one of the best out there right now, even if you don't like the colour.

We're pretty confident, however, that many of you will side with us on this, because the colour really does suit it down to the ground. It's a stealth bomber now, a shadow in hiding, just waiting to be given the opportunity to pounce. It is, as far as we can tell, the kind of RS Batman would drive, which is no bad thing.

Batman won't be getting his hands on the keys any time soon though, mainly because he'd have to pry them from Scott's hands. You see, that's the other hook with this car. Yeah, it's stunning, but we can assure you that as you read this, it's wearing some stone chips, some battle scars and some shredded Toyo rubber. That's how it should be though, because it's a performance Ford and as such, it's been designed to be used, and that's exactly what Scott gets to do in this 390bhp animal, the lucky sod! ☑



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CHRIS POLLIT BRUCE HOLDER





**“HIS EYE WAS
DRAWN TO A
MONDEO,
A MONDEO
THAT SHARED
THE 2.5T
ENGINE AS
FOUND IN
THE FOCUS”**



W

When Ron walked into a Ford dealership in Bromley, his sights were actually set on a Focus ST, and why not? Chassis to die for, power on tap, a world of tuning possibilities open to him, it made sense. However, the dealership's lack of examples for sale soon left Ron feeling a bit deflated. That is, however, until his eye was drawn to a Mondeo, a Mondeo that shared the 2.5t engine as found in the Focus. This obviously set Ron's mind racing, but it wasn't the car he'd initially wanted, so he left the garage with confused thoughts about what to do. It's okay Ron, we've all been there.

So, yeah, a week later and Ron's name was on an invoice for a Mondeo! After a brief moment of thought, it was decided that it would be more exciting to go down an unexplored route. Plus, the fourth generation Mondeo is still something of an unknown in terms of the modified and performance scene, so Ron had a real chance of being a ground-breaker, which is always exciting. He had the right engine after all, so there was nothing to stop him.

Always one to get out and about to meet, Ron soon found himself being further inspired by the cars he was seeing. The Focus STs and RSs with their modifications and their power outputs really began to get Ron's mind racing. So



much so that it wasn't long before he picked up the phone to the guys at Autospecialists to see what they could do to give the one humble rep car a new lease of power.

On went new pipework, a Group A filter and a big old front-mounted intercooler to begin with – the latter ensuring that Ron's Mondeo looked pretty damn mean. Then plans were put in motion to get even more power out of the engine, after all, it was the same basic lump as the ST, so how hard could it be? Turns out, it was quite tricky, owing to the fact the Mondeo has a different ECU, which in turn means there wasn't much in the way of an existing map to apply to it. This was frustrating, Ron had sorted the cooling

and the breathing in readiness for more power, and now he couldn't get it. Or could he?

As luck would have it, and care of Ron's tenacity in finding someone to do the job, it was JW Racing who came to the rescue care of a stage 3 map just ready and waiting for Ron's so far troublesome ECU. Once applied, and thanks to the other mods mentioned, and a turbo-back 3inch stainless exhaust system, the Mondeo was kicking out a more than healthy 325bhp. Is that the most power in the world? No, of course not, but is it enough to make this once humble family hatch an absolute hoot to drive? Oh yeah, you betcha. ➤



“OTHER CONSIDERATIONS HAVE BEEN MADE, TOO, OTHERWISE THE ENGINE WOULD PROBABLY BLOW THE CRAP OUT OF THE DRIVELINE, WHICH IS OF NO USE TO ANYONE!”

Other considerations have been made, too, otherwise the engine would probably blow the crap out of the driveline, which is of no use to anyone! As such, there's now a full Mk2 Focus RS clutch kit fitted, which tightens things up in terms of driving, and it also means Ron can dump his foot into the carpet safe in the knowledge that it can take it. The engine has RS plugs, too, along with an Autospecialist blow-off valve and an Elevate boost solenoid.

Basically, it's not the maddest combination of parts, but the power is plentiful and it can be used in the real world. This is a car that Ron has built to be enjoyed while still being a viable daily driver, he didn't want to spend all his money only to be left with a car that was useless on anything but a track. That's the thing with modifying, sometimes less becomes more just because

of the usability. What would you rather have, 500bhp you can use some of the time or 325bhp you can use every day?

With the mechanicals sorted, Ron turned his attention to the looks of the car. Yes, it had a certain sleeper appeal, but Ron felt it should have looks to suit the way it goes. Nothing over the top, mind – just enough to make it stand out from the crowd.

Half the battle was already won care of the colour, a shade of green that Ron admits he's yet to see on another Mondeo. Add into this the Titanium X sport body kit and you've got one aggressive but good-looking machine. Throw on some 9.5in wide Rota Grids and you're well away from looking anything like any other Mondeo. Some panther black detailing to boot, yeah, that completes the look. ➤



MONDEO ST

The completed car is now charged with the task of being Ron's daily hack as well as being his weekend show warrior. The Mondeo is a cracking car from the off, so it's never going to be an issue to get to be the daily drive, and care of Ron's carefully chosen modifications and resultant 325bhp, it's an absolute hoot to drive, too. Torque on tap and boost aplenty, this is a Mondeo that offers a driving experience like nothing else.

As for being a car that Ron can proudly take to shows and meets, it definitely ticks the box. A Mondeo with any sort of well-executed visual change is always going to turn heads because it's just not something you see, especially in the case of the fourth generation car. But then, when it's parked up and the bonnet is popped, Ron's car does something that many struggle to do: it causes a stir, it generates debate and it inspires people. It's different and refreshing, and we like that.

It might not have been Ron's original plan, but thanks to his conviction and dedication to see everything through,

he's been rewarded with something rare in the world of performance Fords – a car that's truly unique. He's not done yet though, oh no. Now that the car has a good base setup, the hunt is on for a hybrid turbo and some beefier injectors, because Stage 4 is better than Stage 3! Fair play, Ron, though damn you, too, we're going to be spending a lot on the PF Mondeo this month because of you! 📷

“THE COMPLETED CAR IS NOW CHARGED WITH THE TASK OF BEING RON'S DAILY HACK AS WELL AS BEING HIS WEEKEND SHOW WARRIOR”



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As part of a multi-car challenge to take on the UK's best hillclimb venues, David Finlay opted to use a Fiesta ST3 at one venue. How did the car get on? Did it storm the hill or was it stifled by the steepness?

DAVID FINLAY RICH DANBY (ZIPP.CO.UK)

Shelsley Walsh has the history and the sense of theatre. Prescott is mind-bendingly technical. Craigantlet, held on closed public roads just outside Belfast, is raw and intimidating. But ask any of the British Hillclimb Championship regulars which course they respect and fear the most, and they will all say it's Doune.

Less than an hour's drive north of Glasgow, Doune is an attractive hill, but one that will bite you if you get it even slightly wrong. For two-thirds of its length you can't go off, because there is nowhere to go. Stray even an inch from the tarmac on these sections and you'll soon be on your way to, at best, a body repair shop or, at worst, a hospital.

Nobody wants this to happen, of course, and the last time I competed there it was especially important that it didn't happen to me. This was because, along with team-mate Alisdair Suttie, I was driving a Fiesta ST3 supplied by Ford for our Multi-Car Hillclimb Challenge. Ford was hopeful of a good result, but even more hopeful that it would get the car back in one piece. I said I'd do my best.

Part of the Challenge philosophy is to show what can be achieved in motorsport with a completely unmodified car. The Fiesta lay on the fringes of that description, since it had been fitted with the Mountune performance upgrade kit, which increases the maximum power to 212bhp, but since it's sanctioned by Ford and doesn't invalidate the car's warranty, we reckoned it was still within the bounds of acceptability.

In any case, we needed all the help we could get, as the Road-Going Series Production class also contained a track-prepared Subaru Impreza and an Audi Quattro which, though more than thirty years old, was fitted with a screaming KKK turbocharger which boosted its power output to 400bhp. >

"Part of the Challenge philosophy is to show what can be achieved in motorsport with a completely unmodified car"



RISING TO THE CHALLENGE



At this point you're probably expecting me to start making excuses for why the Fiesta was destroyed by the more powerful four-wheel drive opposition. In fact, it didn't work out that way at all. Inevitably, the car lost out at the start, taking around 2.8 seconds to cover the first 64 feet whilst the Subaru and the Audi travelled the same distance in under 2.2, but from then on it began to sparkle.

The key to this was how hard it could be driven through corners that would have had to be treated more cautiously in almost any other hot hatch. On the slowest one, where the gradient changes from one in three to almost level just as the road turns sharp right, there was always a small chirrup of wheelspin from the inside front tyre, but it was easily controlled. Through this section (which also includes much faster right-handers and a tricky Esses section) the Fiesta actually set the best sector time of the whole class on its final run.

That run took 54.32 seconds, which was just enough to stay ahead of the Quattro. To be fair, its owner, Neil Duncanson, was new to Doune and had a lot to learn, but he's a very good driver and his car is well set up, so I'm counting that as a result. >

“The key to this was how hard it could be driven through corners that would have had to be treated more cautiously in almost any other hot hatch”





The Multi-Car Hillclimb Challenge is the result of a conversation in late 2014 between Alisdair Suttie and me. We are both motoring journalists, and we have teamed up on several occasions to compete in hillclimbing - a particularly accessible form of motorsport, since you can do it in a standard car (though feel free to use a purpose-built F1-engined single-seater if that's what you prefer) and two drivers can share a vehicle in one event.

For the 2015 season we thought it would be quite a wheeze to enter as many rounds of the British Leaders Hillclimb Championship as we could, using a different car each time. This would require the support of manufacturers willing to lend us cars from their press fleets, and at first we thought we'd be lucky to get a positive answer from more than two or three of them.

In fact, the response was very positive. At the time of writing we still have to confirm cars for the last two rounds of the season, but assuming that works out we will end up having competed in no fewer than eleven different models.

The range is eye-wateringly broad, and includes a Subaru WRX STI, a Mercedes A 45 AMG, a BMW i8 and, of all things, an Audi S8. Ford's offer of a Fiesta ST was greatly appreciated. Even with the optional Mountune performance kit fitted, it isn't the most powerful car we've driven all year by any means, but its nimble handling was just what was required for the twists and turns of Doune.

One of the most important aspects of the Challenge is to raise awareness for the excellent Blood Bikes charity - do read up about them at www.thenabb.org.uk and donate if you can. We would also like to acknowledge the help given by our sponsor, Primo (www.primopl.com), which specialises in insuring people who own several cars and is therefore a great fit for what we're doing.



A win was never really on the cards because there was little hope of catching Grant McLellan in the Impreza. Still, his best time of 53.15 seconds wasn't terribly far out of reach, especially when you consider that nearly half of his advantage was gained at the start line. If you had seen his car and ours parked next to each other in the paddock you'd have difficulty believing that the result would have been so close, and if we'd had stiffer front springs and tyres that were much stickier but still class-legal, it would have been a lot closer.

Even in standard form, the Fiesta was deeply impressive, and if our adventure proved one thing, it's this: if you're already an ST owner and you wish you had a racing car, the good news is that you already do. 📺

“Grant McLellan’s Impreza wasn’t terribly far out of reach, especially when you consider that nearly half of his advantage was gained at the start line”





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PERFORMANCE **FORD** **ICONS:** RACING PUMA

It's no secret that we're fans of the Puma here at PF, we have one after all! While we love our little silver bullet, it's nothing compared to the Puma to rule all Pumas – the Ford Racing version.

✦ CHRIS POLLITT ✦ BRUCE HOLDER

Ford loves a special edition, exploiting the term to its fullest and using it as a means to bring in the skills and expertise of other companies. Cars that fit this bill have included the Tickford Capri, the RS1700t, the RS200 and more. The commissioning of such a project shows the world what Ford can do when it teams up with the best.

The Puma, in standard 1.7 guise, already embodies that ethos care of an engine co-developed with Yamaha. It's a bloody good engine, too, as we can testify care of PF's own car. However, the standard car, while fun, exciting and at the time a huge break from the visual norm, was destined to be the basis upon which something even more exciting could be built.

Ford needed something fun, something exciting and most importantly of all, something sporty. We're talking about the late '90s here, a time when Ford had no XR, no RS and definitely no ST content within its brochures. So, with the Puma standing as the most dynamic and sporty car within the company's range, the decision was made to bring one of those names to life. You see technically speaking, the Focus ST170 wasn't the first car to car the ST badge. Nope, it was the Puma, care of the ST160...





BEGINNINGS

As a concept, the ST160 was short-lived, but that's only because it was such a success from the off. People wanted the car as soon as they saw it. It was a little bit wider, a little bit more powerful and most importantly of all, it seemed to be a fantastic return to form in terms of Ford making performance cars.

However, Ford wasn't willing to go completely bonkers with the idea, so decided to dip its toe in the water by having 500 of the muscly Puma built, though it wasn't going to be something that Ford would undertake itself. No, for this, Ford turned to long-time friend and carmaker, Tickford.

The coachbuilder was charged with the task of developing and fitting the wider rear wings, the different bumpers, the wider aluminium front wings and all the associated mechanicals that made the car special, such as the wider track, the limited slip differential and the Alcon brakes.

The final result was a stunning version of Ford's sportiest offering of the time. Coated in bright blue paint, fitted with Sparco innards and boasting a world class chassis, the newly renamed Ford Racing Puma was set to be a success. Except, er, it wasn't.

Ford managed to sell just over half the 500 to the general public, with the rest being registered and used as company cars for managers. There was nothing wrong with the car in terms of nuts and bolts and how it drove. The £23,000 however, that was a bit of a problem. Especially when you consider that you could buy a brand new Subaru Impreza for less.

The motoring press loved the FRP though, and that no doubt went some way to saving the car's reputation. Plus, as the year went on, the unexpected exclusivity of the FRP would serve to put it in the books as one of the greats. ➤





LEGACY

The FRP had an odd life. Initially it struggled to sell due to the cost, then as time went on, it fell into the hands of some dedicated owners who have since banded together and created the owner's club. Sadly though, while this was happening, a great many FRPs were falling by the wayside as nothing more than novelty items. This was amplified when the FRP reached a point in the market whereby it became financially viable to buy a decent, solid, loved example solely to break it for parts – the return was well worth the effort, owing to the unique parts fetching strong money.

Sad though it was to see numbers of the limited run car drop due to people buying and breaking them, the reality was that it could only last so long before the finite number of surviving cars would push up the values once again, which is exactly what happened.

Since that bleak time, the FRP has become a car that is loved and respected by those lucky enough to own one. In its own right, it's a wonderful, fun, well-made car. From a historical point of view, it's also very important due to what it stands for in terms of Ford's return to the performance market.

PF DRIVES

Zesty. That's the first adjective the springs to mind when you fire up a FRP. It's just eager and bubbly, and that's just from the turn of a key. Once you stick it in gear and hit the gas, it becomes even more exciting. It growls and pops and you work through the gears, it revs giddily and it scrabbles along the road like a puppy pulling at its lead. It's just fun.

It's not, however, fast. If you buy one of these in the pursuit of straight-line speed, you'll be disappointed. It's not slow, but it's not 'snap your neck' fast. It's 'adequate' for what it is, put it that way. Still, with a chassis like this, speed isn't the main focus, the corners are, and the FRP gobbles them up.



It would be easy to get carried away with this, because you honestly begin to feel invincible. Like you could throw it into any corner at any speed and it'd go 'yup, that's fine, more please'. It's so utterly rewarding to fling around, it feels planted and confident, something that is amplified when you hit the Alcon brakes. It's as if they're saying 'it's okay, we've got your back. Keep having fun'.

After half an hour behind the wheel, you can see why owners love these cars so much. They're almost alive, they have a personality and a certain cheekiness to them. Driving one of these isn't a case of 'I'm having fun', it's a case of 'we're having fun', a rare thing to find in a car.

We have to say, we loved it. It's rarity would perhaps weigh on our minds if the conditions got a bit much, but on the whole, we think this would be a brilliant car to own. 📺



TECH SPEC (ORIGINAL CAR)

Engine: 1.7-litre (1,697cc) 16V Zetec SE, cast aluminum alloy cylinder head and block, DOHC with revised profiles, belt-driven twin camshafts, Ford EEC-V management, sequential electronic fuel injection (SEFI), Ford electronic distributorless, revised camshafts, inlet manifold and exhaust system, 152.9bhp at engine @ 7,000rpm, 162NM @ 4,500rpm

Transmission: 5-speed iB5 manual, standard Ford Puma, longer driveshafts

Suspension: Front: Independent MacPherson strut with uprated offset coil springs/dampers, anti-roll bar, track increased by 35mm per corner, revised track rods. Rear: Semi-independent twist-beam with strut-type uprated coil spring/damper units, rear spacers, track increased by 45mm per corner

Brakes: Front: 295mm ventilated discs, electronic brake force distribution, Alcon 4-pot calipers, Mintex brake pads. Rear: 270mm discs

Wheels & Tyres: Speedline alloy 17 x 7.5-inch multi-spoke rims, fitted with Pirelli P7000 215/40 low profile tyres as standard

Interior: Ford Racing Sparco front sports seats, with tilt control. Rear seats, door side panels and steering wheel in blue Alcantara fabric

Exterior: Wider front wings in aluminum, wider rear wing sections in steel, wider reinforced transfer moulded front and rear bumper assemblies, revised grille, air cooling ducts in new front apron, front air splitter



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HOW TO



Set up suspension

Having fitted adjustable coil-over suspension to the Puma, this month we show how to set it up properly

 JIM BLACKSTOCK

B Back in the July issue, we fitted the GAZ Shocks Gold coil-over and adjustable suspension package to our Project Puma. The results were instant, with the car feeling much more competent and confident.

However, at the time, we noted that we had only set the suspension up based on (relatively) crude ride height measurement and that, to make the most of the potential, the geometry and corner weights needed setting up properly.

Having spent a few hours on the track last month at the PF track evening at Brands Hatch, we felt that, as we have a whole day at Snetterton in September, it was about time we got the suspension looked at and properly set to get the most from it.

So we headed along to Northampton

Motorsport, which boasts not only a rolling road, but also a full four-wheel alignment and corner weight set-up bay.

Now, there is a limit to what can be achieved on the Puma. As the car is a fast road and track day car, we haven't fitted fully adjustable top mounts, for example, to give the opportunity to fine tune camber or caster. Of course, the front toe angles can be adjusted but we wanted to see how far, if at all, the GAZ hardware threw the settings out.

We also wanted to make sure that the corner weights, which can be adjusted thanks to the spring platforms on the dampers, were set as close to perfect as is realistic for a road car.

So, full of coffee, we headed for the workshop, where technician Chris took us through the process. >

Costs

Four-wheel alignment check and adjust from **£80**

Corner weight check and adjust from **£50**

Time taken:
2 hours

Difficulty:
N/A

Tools:
N/A

THANKS

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STEP 1

As this is a road car and to allow for variations either side, Northampton Motorsport top man Troy told us to bring the car in with half a tank of fuel

STEP 2

The first thing Chris did was to raise the car up in the air on the scissor lift. This allows work on the car without getting in the way

STEP 3

The whole process needs to take place on the car with the right tyre pressures, so he checked these before he began and the suspension for any play, which would make the whole process pointless

STEP 4

A stand goes under each wheel, fitted with a sliding and rotating turntable so that the suspension can settle properly when the car is lowered

STEP 5

The corner weights are set first, so on top of each stand is one of the wireless scales

STEP 6

The brakes are locked on so the car is safe four feet in the air and the measuring process is ready to begin

STEP 7

The car is lowered onto the scales so the full weight is off the lift and Chris bounced the suspension to make sure it was settled. If the car has adjustable dampers, these are set to full soft and also any anti-roll bar links are removed so that the dampers and roll bar don't resist the changes being made to ride height and weight distribution

STEP 8

The initial readings show some unbalance in the chassis. You can see a 12kg difference across the front axle and a 23kg difference across the rear. However, corner weights are balanced diagonally and the key figures are the two 'Cross %' displays, which should be 50/50 ideally





9



10

STEP 9

Weight is increased by raising a bottom spring platform, so the front right lower platform needs to be raised. Experience told Chris to start with about 10mm

STEP 10

Once the platform was wound up, he locked the two parts together to prevent it moving when finished



11



12

STEP 11

The same process was carried out on the left rear, since this was showing lower weight than the other side

STEP 12

The first go was perfect on the front - 500g between the front two wheels is bang on. The rear still needs a bit of work, so...

STEP 13

... Chris lowered the right and raised the left to balance it out

STEP 14

Balancing the rear affected the front slightly - inevitably - but the crucial diagonal split is what we're looking for. And there it is - perfect 50/50 split, allowing the car to handle consistently through both left and right hand corners, with any imbalance across axles mostly nullified by the weight transfer when accelerating or braking. Job done

STEP 15

Now the alignment. A reflective panel is fitted to the wheel to reflect a beam back to the wall-mounted transmitter

STEP 16

A separate reflector is mounted to each of the wheels >



13



14



15



16

STEP 17

A pair of emitters on each side send and receive infra-red signals which tell the computer what the camber, caster and toe-angles of the wheels are

STEP 18

Chris spun the wheels to allow the computer to determine if there is any distortion in the wheel rims. It will automatically compensate so that the alignment is correct for the hub so any wheels can be fitted

STEP 19

Again, the computer prompts Chris what to do, starting with fixing the brakes and swinging the steering

STEP 20

The steering swing shows the computer the range of caster change, which gives the static figure. It also measures the toe and camber

STEP 21

The initial results were pretty good. Everything is within tolerance, with the exception of camber on the front left. However, the measurement here is in degrees and minutes, with 60 minutes in a degree, so it is actually 0.3 degrees out which is acceptable for us

STEP 22

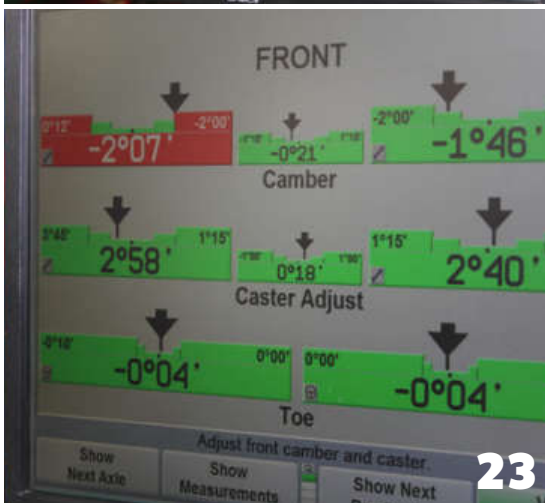
Changing the toe angles is straightforward - loosen the lock nut and wind the track rod to make the angles less negative, ie pointing more inwards

STEP 23

As you can see, everything is in the green except front left camber and that's only just outside tolerance. For a road car, with non-adjustable camber, that's fine

STEP 24

All done, ready for a road test





Results

Speaking to Chris as we went through the process, he was keen to explain that we may not feel the benefits of getting the corner weights set up properly until the next time we were out on the circuit. We might notice some benefit on a fast charge across country but realistically, the circuit is where we would likely notice the gains.

In fact, he was absolutely right. The car felt the same on the way back from Northampton as it did on the way, which is hardly surprising since we were on public roads full of mid-week traffic. We'll be able

to report better on this aspect after the next track day at Snetterton.

However, we reckoned we should feel improvements after re-setting the toe angles. The only – and it's a very small – criticism we could level at the work we did ahead of the Brands Hatch track evening was a very slight vague feeling in a straight line; it wasn't as though the car wasn't stable – it was – but a very slight feeling of impreciseness which didn't match the overall feeling.

Once the steering was reset, this was cured completely, as you'd expect. With too much

toe-out, which is what we had to begin with, the front of the car was less stable, but once it was set to within tolerance, it was more so and the vagueness was eliminated completely.

A by-product of this was an accompanying improvement in initial turn-in, with the front of the car responding better to steering inputs, again as you would expect with less toe-out.

Overall, a worthwhile experience with direct benefits in handling and road holding, as well as the knowledge that the suspension was properly set up. 📌



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BACK TO BASICS

ENGINES

Bottom End

In the first of another two-parter, we look at the bottom end of the engine, the area where all the hard work gets done...

JIM BLACKSTOCK CAPRICORN AUTOMOTIVE

When it comes to engines – any engine – the bottom end, comprising the block, the reciprocating components and the oil and water systems, is absolutely crucial to not only performance but reliability. It might be fairly straightforward to get monster power but unless the bottom end is strong enough, that monster power is only going to last for as long as it takes to say, “Holy shi...” before something goes wrong and you have a big mess – and bill – to show for your efforts. In the first of this two-part feature, we’re looking at the bottom end; what’s involved, what are the limitations and how these can be refined to increase performance and reliability and longevity. As far as we’re concerned, the bottom end is everything below the cylinder head gasket while next month, we’ll be looking at everything above it, under the ‘Top End’ banner.

Basic concept

The basic concept of the internal combustion engine is simple: a very fast increase in pressure, caused by the rapid expansion of gas following combustion of fuel (either petrol or diesel) within a sealed chamber exerts pressure on the top of a piston. This piston slides up and down in a straight cylinder bore repeatedly. This up and down motion is translated into rotational movement by a crankshaft, which the pistons are fixed to via rods mounted



off-centre and this rotational movement is passed on to the gearbox and, ultimately, to the road wheels.

Four strokes

The basic petrol or diesel engines typically feature four phases in a single, complete cycle, which takes place over two full

rotations of the crankshaft. Most people have heard of ‘suck-squeeze-bang-blow’. The first phase is Induction (suck), where a partial vacuum in the cylinder, as the piston moves down, draws air into the combustion chamber through an open valve. Depending on the type of engine and fuel delivery, fuel is also introduced ➤

during this phase, either throughout or towards the end of the phase and even into the early stages of the next.

The second phase is compression (squeeze), where the piston travels up the now-sealed chamber, compressing the air/fuel mixture. Just before the piston reaches the top of its travel, the mixture is ignited in the third phase (ignition or bang) so that the maximum safe mechanical advantage acting on the piston and rod combination is generated for the engine speed and load and the combustion pressure forces the piston back down the cylinder bore.

Around the time the piston reaches the bottom of the bore and starts to travel upwards again, another valve opens to allow the combustion products (exhaust or blow) gases to exit and when the piston approaches the top of the bore, it closes and the inlet valve opens again and the whole process repeats itself.

Layout

There are several different types of engine layout adopted by different manufacturers but the two that we are familiar with in Ford-land are in-line and V-engines.

In-line, as the name suggests, features three, four or five cylinders arranged in a straight line while a V-engine features typically six or eight cylinders in a V-shaped format within the block.

There are inherent advantages and

disadvantages for each; in-line engines tend to perform pretty well in most circumstances but can be longer yet narrower than other layouts, allowing for packaging of ancillaries or turbochargers/superchargers alongside to cut down on space.

V-engines, on the other hand, tend to be torquey and have good low-to-mid-range performance while many also nowadays have good top-end output. The angle between the two banks makes the engine wider than a corresponding in-line, which could lead to packaging issues and poor exhaust manifold design though.

Capacity

Anyone even remotely interested in cars has heard the adage "There ain't no substitute for cubic inches". The basic premise is that when it comes to engines, bigger is always better and that means the bigger the capacity, the better. All other things being equal, then, of course, a two-litre version of an identically designed four-litre engine will always lose out. On an engine dynamometer, perhaps. But in real life, in a car, then it isn't necessarily so. The smaller engine leaves room for forced induction for example, which not only improves outright performance but also, efficiency. So bigger isn't always necessarily better.

The capacity of an engine is the total of the swept volume of the pistons, ie the total of the volume of the cylinder that

the piston prescribes from its highest to its lowest point. This is pretty much – though not always – expressed in cubic centimetres or litres, with 1000cc equalling one litre. The current trend in engine design is to reduce the capacity but increase performance and efficiency through better design, reducing the emissions and hence, the load on the environment.

Bore and stroke

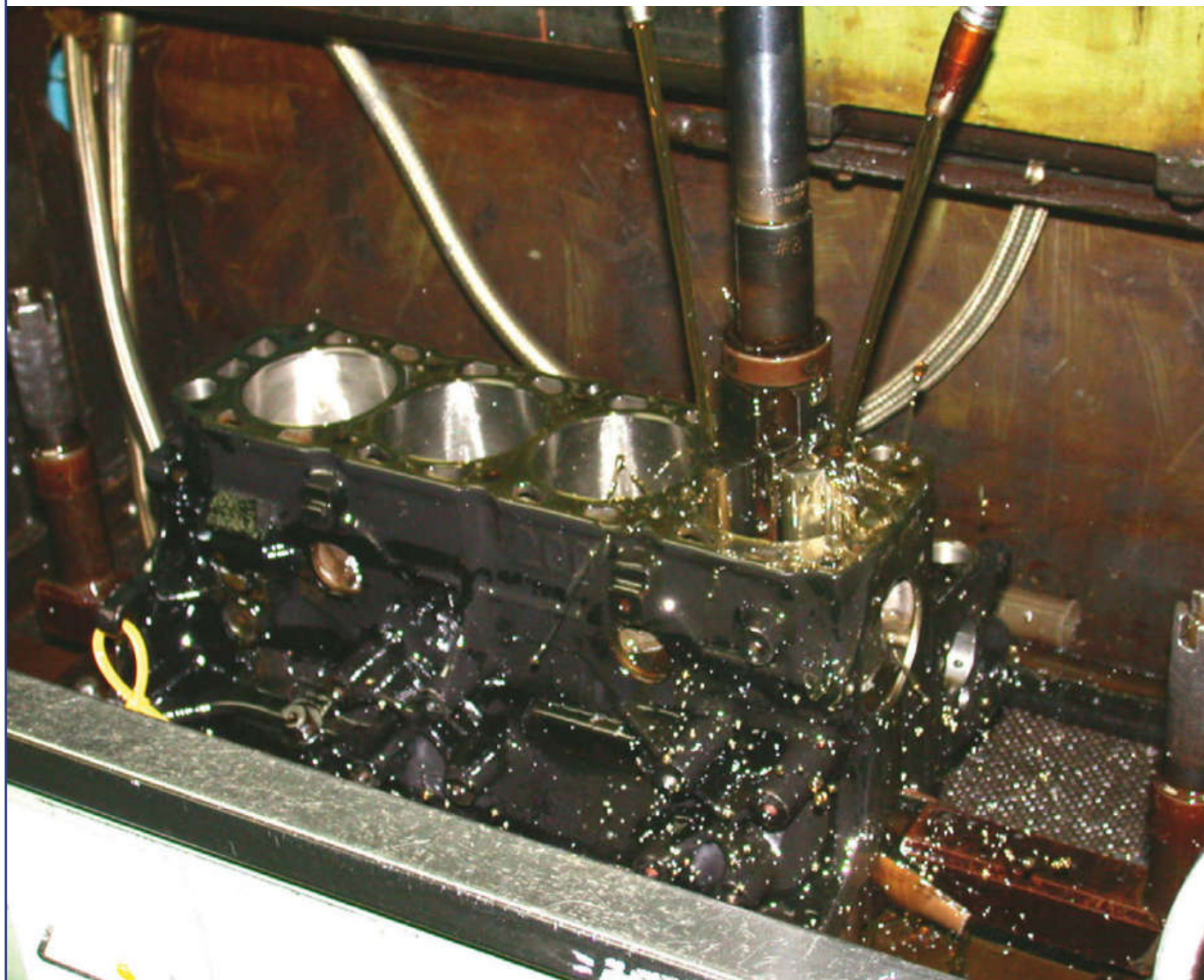
The capacity can be worked out through a knowledge of the engine's bore and stroke. The bore is the diameter of the cylinder that the piston moves in and the stroke is the linear distance that the piston travels.

The relationship between bore and stroke can have an effect on how the engine behaves and its characteristics. A square engine is one where the stroke and bore are roughly equal, with a ratio of around 1:1. An oversquare engine is one where the bore is greater than the stroke and this results in an engine that is inherently 'revvy' and develops its peak torque relatively high up the rev range.

An undersquare engine, on the other hand, uses a stroke greater than the bore and it tends to be less revvy but with its torque coming in lower down the rev range, making it more driveable.

Fuel & compression ratio

Another factor in engine efficiency is the compression ratio or by how much the inlet charge is compressed before it is ignited.





In a petrol engine, the fuel is ignited by a spark but in a diesel engine, it self-ignites as a result of the in-chamber pressure and temperature reaching the necessary level to spontaneously ignite.

Typically, for a normally aspirated petrol engine, a compression ratio in the region of around 10:1 - 12:1 would be used, depending on the state of tune of the engine. This means that the volume of the incoming air is reduced to 1/10 - 1/12 its original volume, determined by the total volume of the chamber when the piston is at the bottom of its travel compared with that when it is at the top.

For an engine using forced induction - either a turbocharger or supercharger - this would be lower, since the air entering the engine is already at a pressure greater than atmospheric, due to the nature of the turbo. On a diesel engine, however, the ignition process is as a result of the compression pressure, so the ratio is closer to around 20:1, depending on the injection method. There is a limit to the compression ratio because of detonation, which is the spontaneous ignition of the air/fuel mixture before the prescribed ignition point. This can increase chamber pressures and temperatures enormously and can affect output in the best case and in the worse case, damage the engine significantly and, potentially, terminally.

Components

There are several key components that make up the bottom end of the engine. The first is the block and this houses all the important components, so it must be physically and thermally very strong, capable of sustaining a huge amount of stress.

Older blocks were generally cast iron, as this was both strong, cheap and easy to work with. However, it was heavy - very heavy - and this eventually began to affect

the efficiency equation, so designers started to cast blocks in alloy instead. This results in a much lighter engine that can dissipate heat quicker.

However, a piston cannot typically run in alloy, so the cylinder walls either had to be treated to provide the necessary wear resistance or special cylinders, or liners, had to be inserted to house the pistons.

These can typically either be referred to as wet or dry liners; wet liners are a series of full cylinders housed in a void and surrounded by coolant in direct contact to manage the temperatures. Dry liners are tubes sleeved into the engine block and rely on heat conduction through the block material and into the coolant, with no direct contact to the coolant. Cylinder blocks tend to be cast since this allows the intricate internal shapes required for both the coolant and the lubricant systems while maintaining a satisfactory weight, accuracy and repeatability as well as production time and managing costs.

Crank

Housed within the engine block is the crankshaft and this is what translates the up and down motion of the pistons into useable rotational motion. There are two sets of bearings on the crankshaft; the main bearings are the ones on the centreline of the crank and allow it to rotate within the cylinder block while the big end bearings are those where the pistons mount to, via connecting rods.

The crank is one of the key components that determines how much torque the engine is capable of developing and also how fast it is capable of turning. Too much torque and the crank can bend or even break and too fast and it or one of the other components can fail, with possibly catastrophic results.

Most road engine cranks are cast, as this is a cheap and effective method of mass-

producing components that are sufficient for everyday use. Molten metal is poured into a mould and when cooled and solidified, it is removed from the mould and the bearing surfaces machined and heat treated to provide the necessary wear resistance.

A stronger method is forging, where a slug of metal is heated and introduced into the mould under pressure. The result is that the grains of the material follow the overall shape of the crank and this gives greater inherent strength than a cast item.

The ultimate crankshaft is a billet crank, machined from a single solid piece of metal. These are capable of sustaining huge outputs and engine speeds - Formula One engines were hitting around 20,000rpm before turbos were introduced and they use billet cranks, albeit in very specialised materials.

Rods

The connecting rods, or con' rods, have two ends; the big end is where they mount to the crank shaft and the little end is where they join to the piston. Typically, the big end will be split and the bearing cap bolts to the rod while the little end usually has a pin - a gudgeon pin - floating in it, which also fits within the piston and is held in place by circlips.

Like the crankshaft, rods can be cast, forged or even machined from solid billet. Typically, performance versions will have either an I or an H section, using the same technology as steel beams in building construction. In one direction, they are incredibly strong, to resist the compression and extension forces experienced when the piston reaches the bottom and the top of its stroke respectively, as well as side thrust forces. However, using the I or H section means that that strength >



THANKS

Capricorn Automotive
Capricornauto.co.uk



in one direction doesn't come at the cost of weight, since the rod's own weight would then affect its strength.

Pistons

The piston exists in one of the harshest environments possible so it's not surprising that these also follow the cast, forged or billet route, depending on what the engine is intended for. They have to endure extreme changes in pressure and temperature in the crown – the part facing the combustion episode – with forces of several tonnes per piston usual for road engines.

The basic design is an upturned cup and they typically include three sprung rings in the skirt – the part which sits inside the bore. Normally, there are two compression rings, to keep engine compression and pressure above the piston and an oil scraper ring that removes oil from the cylinder wall to prevent it being burned and used.

The skirt of the piston can be cut away in the axis of the crankshaft, since this does not need to resist wear. This reduces the overall weight without compromising strength while the design of the crown can affect how the incoming air behaves and in particular, how the fuel mixes with it and is distributed within the combustion chamber – more on that next month.

Oil system

Both the main and big end bearings on the crankshaft are oil-fed fluid bearings, meaning a pressurised film of oil is used to keep the stationary and rotating components apart, minimising friction and wear. Typically, the main bearings are fed with oil from within the cylinder block, from the oil pump which is driven off the crankshaft and then drillings within the crankshaft transfer oil to the big end bearings. In some cases, oil can also pass up the connecting rod to the little end, lubricating the gudgeon pin where the piston


joins to the rod and some engines can even incorporate oil sprays onto the underside of the piston to help cool it.

Oil that is not used to travel up the rod to the piston returns to the oil sump at the bottom of the engine to be picked up again from the volume of oil stored there. Some cars use plates in the sump to prevent the oil moving too much when the car corners hard, since if this is excessive, it could surge away from the pick-up pipe and the engine could momentarily run dry, with potentially disastrous results.

Taking this one step further is the dry sump system, where the oil is stored in an external tank and pumped under constant pressure around the engine, so it will never experience oil starvation.

Cooling system

A system of coolant passageways run within the engine block – and the cylinder head – with the intention of removing heat from the cylinder bores and keeping temperatures to a manageable level. A pump, also crankshaft-driven, circulates coolant through the engine block and through a radiator located at the front of the car. When the car is moving, air flowing across the radiator removes thermal energy and if vehicle movement is insufficient for this, a supplementary fan is also used, either engine or electrically driven as and when needed.

Historically, water was used as the coolant but modern technology has resulted in a new breed of additives and even 'waterless' coolants, capable of removing more heat and sustaining higher temperatures than water. 



NEXT MONTH

We'll be looking at the top end; the cylinder head, inlet and exhaust valves, camshafts, fuel injection and carburettors, ignition systems and briefly touching on forced induction – a separate subject in its own right.



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Cosworth YB

If there's one engine that is core to the Performance Ford world, it's the Cosworth YB. Here's what it is and how to get the most from it.

JIM BLACKSTOCK FORD | GGR

B Back in the mid-1990s, the modified world revolved around one word: "Cossie". This referred to the two-litre, twin-cam, 16-valve turbocharged engine that Cosworth worked on with Ford and which debuted in the three-door Ford Sierra Cosworth and went on to power hundreds, if not thousands, of Fords as well as other marques as the transplant option of choice for a generation of modifiers.

It seems only fitting that we end the Motormouth mini-series with a profile on the YB, since it is arguably one of the most

tuneable engines in the Ford world and also, one of those with the highest number of tuners and 'tuners'.

The Technology

The technology behind the YB wasn't exactly earth-shattering; take a strong, cast iron engine block from the Pinto range (designated the 205), fit strong components to it and then get renowned engine design leaders and long-time Ford collaborators Cosworth to design a 16-valve head for it and bolt on a turbocharger.

These were the days before variable valve

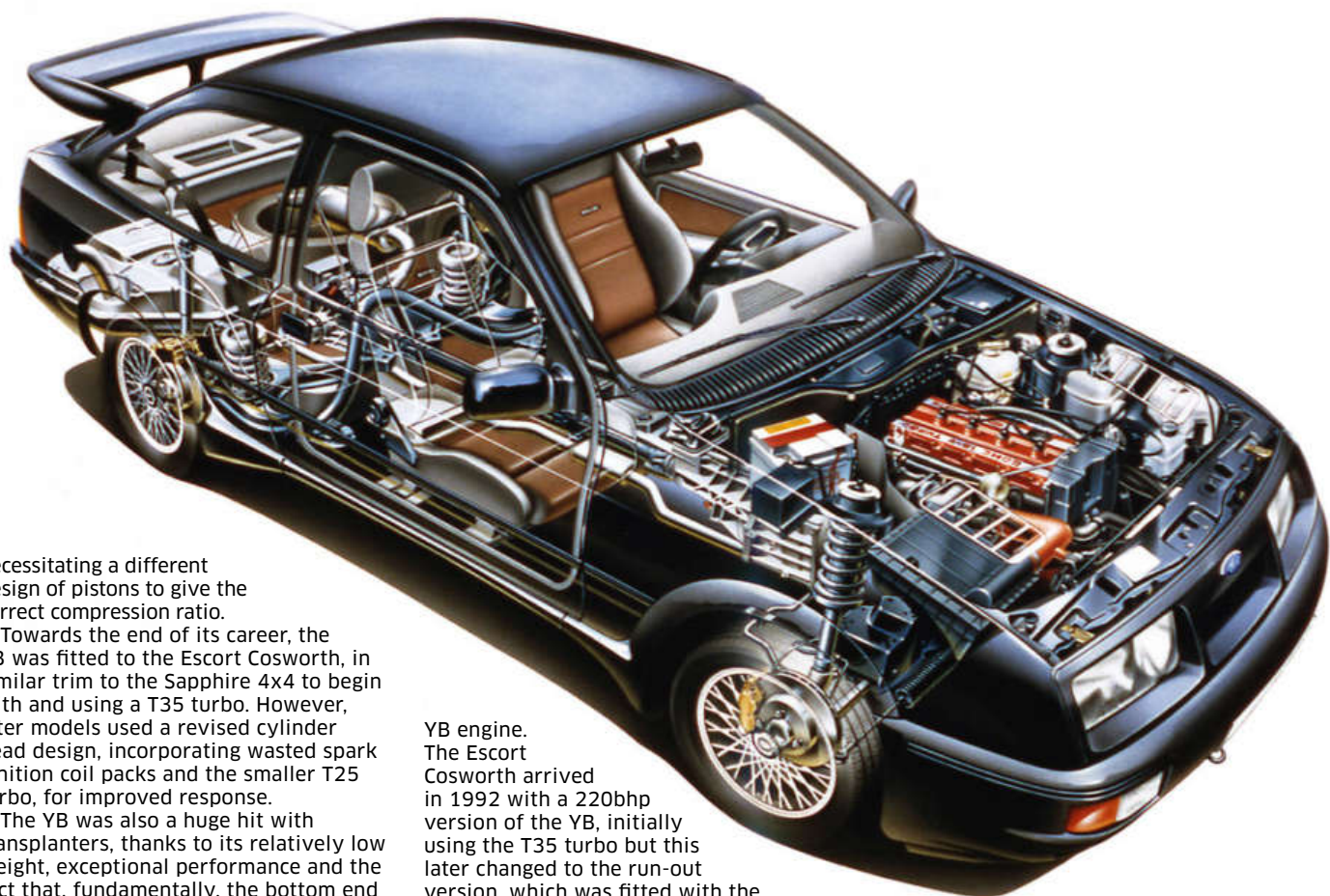


timing and the very first YB, the YBB, used a relatively conservative Garrett T3 turbo to give excellent response and a healthy 204bhp out of the box.

However, Ford soon needed more grunt to remain competitive in touring car racing, where the Sierra Cosworth had been exceptionally successful and so, the second generation of the engine, used in the RS500 models, were fitted with a larger T4 turbocharger and a host of other revisions, including revised water and oil pumps, bigger cylinder head ports and a larger inlet plenum. For Group A racing homologation, an extra rail of injectors was fitted, to flow enough fuel for the 550bhp or so that the racers developed. However, on the road cars, these were not actually used and the standard engine, now designated the YBD, gave 224bhp in road trim.

There followed a 4WD version that used an uprated engine block, designated the 200, which, among other revisions, had more metal towards the bottom, supporting the bottom of the cylinder bores. It also featured a revised exhaust manifold that improved response and a cylinder head with a smaller combustion chamber, >





necessitating a different design of pistons to give the correct compression ratio.

Towards the end of its career, the YB was fitted to the Escort Cosworth, in similar trim to the Sapphire 4x4 to begin with and using a T35 turbo. However, later models used a revised cylinder head design, incorporating wasted spark ignition coil packs and the smaller T25 turbo, for improved response.

The YB was also a huge hit with transplanters, thanks to its relatively low weight, exceptional performance and the fact that, fundamentally, the bottom end was Pinto so it could easily be fitted in a chassis that had been designed for the older, 8V engine. Also, as the ECU formed part of the stand-alone engine electrics on early 2WD engines, along with its own loom requiring only battery feed, ignition feed and earth to run, it was easy to integrate into a huge variety of cars.

The Range

The YB first became available in 1986, in the Ford Sierra Cosworth. 5,000 units were built to comply with touring car racing homologation requirements and the car was an instant hit. Using the T5, five-speed, rear-wheel-drive gearbox and a limited slip differential, the Sierra Cosworth became the definitive performance Ford for a generation.

Two years later, the RS500 homologation special was launched, converted by Tickford to a higher spec to allow for more power for touring car racing. Just 500 examples were made, with the larger turbo, additional injectors, larger intercooler and uprated fuel and oil systems.

Because Cosworth had insisted on Ford placing an order for around 15,000 units of the engine, not just the 5,000 for the initial three-door, Ford had plenty of engines left over, so the four-door saloon version of the Sierra, the Sapphire, also got a YB-engined Cosworth variant.

By this point, not only were 'Cossies' and 'Saffs' successful in circuit racing, they were starting to be used in rallying. However, two-wheel drive and 200+bhp from a turbo was a bit of a handful and so, in 1990, the Sierra Sapphire 4x4 was launched. There were several changes to the engine and the MT75 transmission meant that the car was a massive hit, both on the road and the rally stage.

Eventually, the Sierra was replaced by the Mondeo but it would be the Escort that would be the final model to use the

YB engine.

The Escort Cosworth arrived in 1992 with a 220bhp version of the YB, initially using the T35 turbo but this later changed to the run-out version, which was fitted with the smaller, T25 example.

The Improvements

If you were lucky – and rich – enough to find a completely standard YB-engined Cosworth nowadays, the first step in tuning it would be a replacement turbo wastegate actuator to increase the boost, a remap to take care of the fuelling and a bigger bore exhaust to allow the engine to breathe. This would bring the power up to around 270bhp plus change without sacrificing driveability since the original turbo remains. However, the transition onto boost will be more noticeable due to the greater difference between on and off-boost conditions.

Next would be the addition of a bit more boost and a more carefully developed engine map, with replacement injectors to

flow enough fuel to not only get the best power but also to stop it running lean. A set of the fabled higher capacity 'Greens' (Bosch injectors were colour-coded) will fit the bill here.

In addition, a replacement intercooler will not only help to boost power a bit but also cool the inlet charge, which will help to prevent detonation, the Cossie-killer. With these modifications and the right ECU chip – probably developed by ex-Ford Motorsport engineer Ahmed Bayjoo – outputs in the region of 320-350bhp are available, depending on who you speak to.

Plenty more is available but things start to get a bit serious now. For big engines, the 200 block is preferred, since the extra



meat means it can handle the increases in boost that will be necessary to generate the power. In fact, Cosworth itself stated that the limit for the original 205 block was 350bhp. Up-rated head gaskets became necessary from this point on, since the originals had a habit of distorting the fire ring around the combustion chamber, allowing pressure into the water jacket and blowing radiators apart.

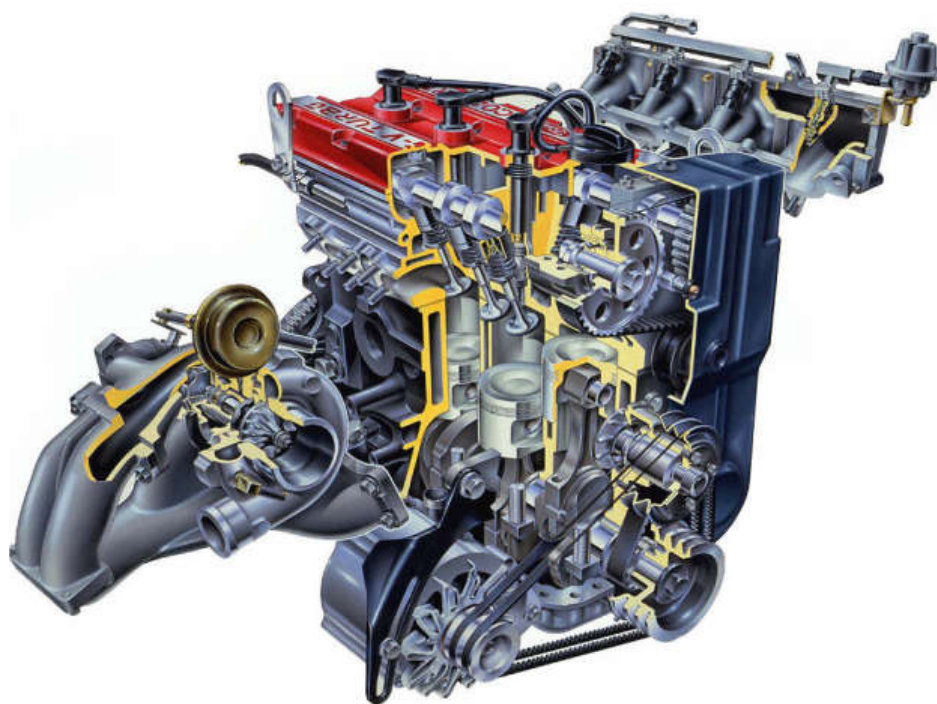
With the bottom end sorted, the compression ratio needs to be reduced to cope with the increased pressures and once done, the stock T3 turbo needs to be changed to deliver the higher boost required. The first step in this process would be either the turbo from the Escort Cosworth, the T35 or a hybrid unit, using the 4x4 exhaust side and the Escort inlet, to give good response and performance.

A camshaft change and a little head work can help to smooth the power delivery on engines with hybrid turbos and with the fabled 'Three Bar MAP sensor' and the right ECU map, you could expect a reliable output in the region of 400-450bhp, depending on the spec of the turbo.

Once again, more is available but for very serious engines. The Group A touring cars of the day were reported to be running around 500-550bhp and this is possible for road cars but with more work. The bigger T4 turbo is necessary, as is a lot more cylinder head work, to increase the valve size as well as open out the ports to flow the huge amounts of air necessary. Higher specification cams are also necessary, as are higher capacity injectors to get enough fuel into the chambers at full boost.

The preferred choice here is eight green injectors run sequentially by a management system such as that from Pectel, to give the right fuelling in virtually all engine conditions. Other systems ran four huge grey injectors, so that to get the right amount of fuel at full boost, they would likely be over-fuelling at lower boost conditions, affecting driveability.

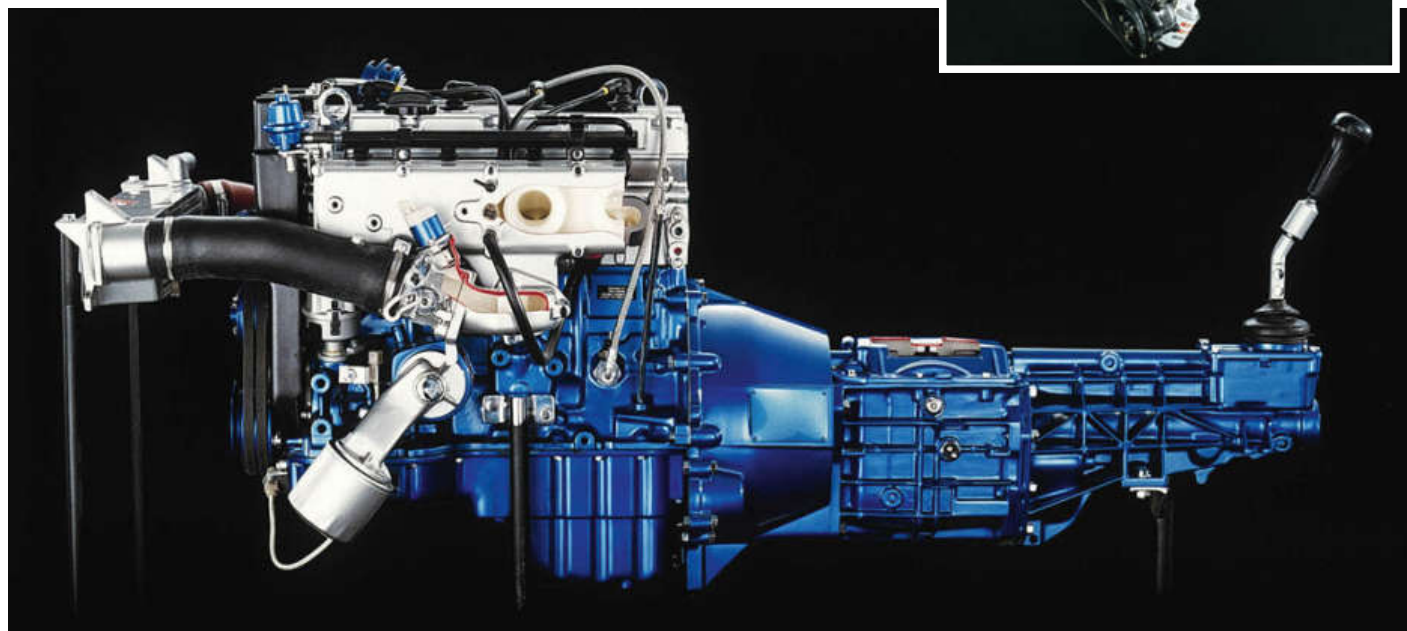
With the right components and map, outputs of 500-550bhp are possible for use on the road, although this will be a fairly hairy prospect and having seen a few back



WHAT'S IN A NAME

According to Graham Goode Racing, the following designations were applied to the basic YB engine throughout its life:

YBA	Initial development, non-turbo 16V engine
YBB	Two-wheel drive Cosworth Engine
YBC	Group A Version of YBB
YBD	RS 500 engine
YBE	Not used
YBF	Group A RS500 engine
YBG	4x4 engine used on 'Green Top' Sapphire Cosworth engine with catalytic converter
YBJ	Red Top 4x4 engine
YBT	Large Turbo Escort Cosworth
YBP	Small Turbo Escort Cosworth





CONTACTS

Graham Goode Racing
grahamgoode.com

Cosworth
cosworth.com

Burton Power
burtonpower.com

John Wilcox Competition Engines
wilcoxengines.co.uk

Reyland Motorsport
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in the day, not something we'd relish driving in the wet.

Another option for using a YB is to go the aspirated route. While it was a popular transplant option in turbo form, it was also a pretty good choice when the blower was stripped off and it became a normally aspirated 16-valve, two-litre motor. A very strong bottom end meant reliability with the potential for more than 100bhp/litre, the Cosworth golden figure that it set as its target when developing the turbo'd version.

The first step is to bring the compression ratio up to aspirated levels – 12:1 or more and open out the cylinder head to allow air to flow. This isn't so important with turbo applications, since the pressure difference across the valves is greater but with only atmospheric pressure to get the air moving, the restrictions need to be as small as possible.

Cams need changing while solid valve lifters will need to be used instead of the turbo's hydraulic versions and either a pair of carburettors – 48mm minimum – or throttle body fuel injection fitted to handle the fuel. For old school, a Pinto distributor can be used for the ignition although a managed ignition system will work better with injection.

Depending on the spec of the headwork and the cams used, you can expect in excess of 240bhp.

The Ultimate

The ultimate Cossie? For many, it is, and always will be, the RS500 touring car, in whatever livery conjures up the most

evocative memories. For me, it's the Texaco RS500s that spring to mind.

I remember seeing them squirming for grip, hearing the rush of boost coming in and the chatter of the wastegates and dump valves as they changed gear and vented more than 2bar boost, with plumes of raw fuel coming out of the exhausts on over-run. The YB, in a touring car – any touring car, whether BTCC or at the Bathurst 1000, which they won twice – was a sight, sound and smell to behold. 🏁





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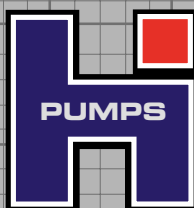
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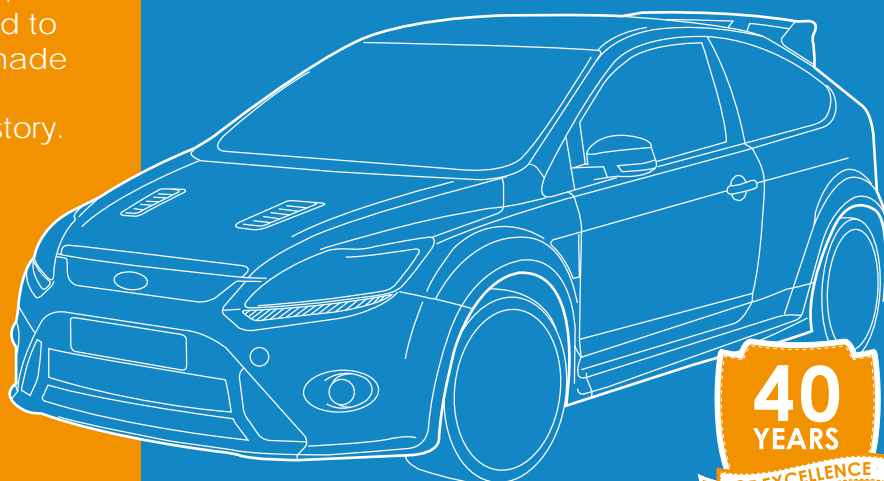
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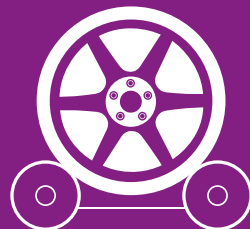
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MOTORSPORT ROUNDUP

Plenty going on for the Blue Oval in the world of motorsport this month...



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MEATY GT

Out on the Sebring track Ford have been testing their GT racer, so the sound of that V6 engine has been revealed for the first time – that rumbling V6 pops, splutters and screams just like we hoped. We hope to get over to Le Mans next year to see it for ourselves!



DOWN IN DEUTSCHLAND

M-Sport World Rally Team's Elfyn Evans and Ott Tänak experienced both the highs and the lows of the WRC at this year's Rallye Deutschland. The Ford Fiesta RS WRC drivers displayed some great speed, but it went unrewarded at the first all-tarmac event of the year.

Evans had the potential to challenge for the top positions this weekend, but he was unable to sustain his impressive pace over the course of the whole rally. They set the second fastest time on SS9 and the third fastest time on SS19, they were also the fastest crew through SS18 – making Evans the only man other than Sebastien Ogier and Jari-Matti Latvala to secure a stage win.

Unfortunately, the M-Sport man was unable to maximise the available grip in the unseasonably high temperatures that blighted the afternoon speed tests – an issue that demoted him to sixth place overall.

In the sister Fiesta RS WRC, Tänak was enjoying his first taste of a world rally car on Tarmac since this time three years ago. Having been caught out by an unexpected patch of gravel on the

opening speed test, he and co-driver Raigo Molder were lucky to escape with mere cosmetic damage.

Following that time loss, the pairing focused on determining the optimum set-up and were able to increase their pace significantly over the second pass – posting the fourth fastest time through SS14 as well as the points-paying Power Stage (SS21).

Elfyn Evans said: "I can't say I'm satisfied with the rally as a whole, but there were a lot of positives and I was certainly satisfied with our performance on a couple of individual stages. We came very close to winning two stages – and we did win one – but we didn't get everything 100 percent right this weekend."

Ott Tänak said: "I knew before the start that this would be a tricky event for us as we haven't driven a world rally car on pure Tarmac for quite a long time. Also, this was the first event with the new car on this surface so there was always going to be a lot to learn and a lot to discover throughout the weekend."

"I didn't feel as confident or as natural with the driving as I have more recently on gravel so I had to push myself and we made a couple of small mistakes because of that."

MOTORSPORT ROUNDUP



OLLIE'S ON IT

British Rallycross protagonist Ollie O'Donovan claimed an emphatic win in this weekend's round of the championship at Lydden Hill. O'Donovan, in his Ford Fiesta Supercar, came from the second row of the final to claim a win and keep his aspirations for the 2015 title alive.

O'Donovan found himself on the second row of the grid for the start of the final race, having won his first heat then

finished fourth and ninth in the following two respectively. Off the start line he catapulted himself into the lead as the cars headed for the first corner.

He maintained his lead throughout the race, save for a brief period when pole-position starter Kevin Procter took his joker lap but O'Donovan maintained his momentum to claim the win and with it, his hopes for the 2015 season. He is now

23 points adrift of the lead with a further 37 points available at the season-closer in October.

Commenting, O'Donovan said: "To win at Lydden is fantastic. The car is constantly improving and I love driving it. I think we can continue pushing forward."

The final round of the season takes place at Croft near Darlington on the weekend of October 10-11th.

WE WANT YOU!

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FAST FIELDING

Sennan Fielding emerged victorious from a chaotic and accident-filled 20th round of MSA Formula at Knockhill to claim his third win of the season for the JHR Developments team. His triumph came at the expense of race-long leader Dan Ticktum, whose car failed him on the final lap. Colton Herta claimed second spot for Carlin, with Ticktum's Fortec teammate Josh Smith salvaging something for the squad with a hard-earned third place.



©PETER LABOURNE

QUICK OFF THE BLOCKS

At the halfway point of the 2015 Red Bull Global Rallycross season, Ford Performance's results are unmatched. The top four drivers in the hunt for the championship are behind the wheels of Ford Fiesta STs, the manufacturer has tallied 29 heat wins, and a Fiesta ST driver has been at the top of the podium in five of the season's six races.

Hoonigan Racing Division's Ken Block leads the series with a commanding 260 points and is responsible for three of Ford's five wins.

Olsberg MSE (OMSE) rookie Sebastian Eriksson is sitting in second with 234 points. He took home an X Games medal in early June and has since been on four of five podiums, including a win at Daytona International Speedway.

Austin Dyne of Bryan Herta Rallysport is in third place with 195 points. Dyne earned his first Supercar podium finish at the Daytona event, and has been consistent since then. He - along with Patrik Sandell, who took home the team's first victory - is definitely making a name for Bryan Herta Rallysport in Red Bull Global Rallycross.

Reigning Red Bull Global Rallycross Champion Joni Wiman sits fourth in points standings with 185. A string of bad luck - health issues, mechanical failures and the like - has left him off of the podium in 2015, but he's far from out of contention. Fourth is the same position he was in halfway through last season, when he ended up on top.



SO CLOSE IN SOUTH AFRICA

The Ford Performance rally team of Mark Cronje and Robin Houghton looked set to claim their fourth win of the 2015 season on the Imperial Toyota Tshwane Motor Rally, but unfortunately it was not to be.

Their dominance at the front of the field for most of the weekend was dealt a cruel blow on the penultimate stage when their S2000 Fiesta suffered a broken steering linkage, ultimately costing them more than 16 minutes, which dropped them down to 10th place at the finish.

On the opening Friday they were untouchable, claiming all four of the stage wins and headed into the overnight stop with a lead of 12.2 sec over championship rivals Leeroy Poulter and Elvéne Coetzee (Toyota).

The former double champions even

claimed the fastest time on the final stage, but it did little to improve their chances of glory, and they ultimately had to settle for 10th overall with their long-running Toyota rivals claiming the victory.

"Obviously the outcome was hugely disappointing, but we proved that we had the pace, and all the work the team has done to improve the car paid off," Cronje commented. "We'll have to dig really deep with only two events left, and this will take the championship battle right to the final rally."

"We fought a really good fight," Houghton added. "We were happy with our performance and gave the spectators a good show. The team worked really hard for this event and the effort definitely paid off, so we'll take these learnings into the last two rallies."



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Collins Performance

A one-stop-shop for tuning your Ford, Collins Performance has become one of the main players in the industry. Here's a look at why that's the case...

✎ CHRIS POLLITT ✎ IAN ALLEN

Reputation is everything, and when you're looking at a business that's been run by the same family for 35 years, you can be sure that the reputation attached is of a solid nature – you don't make it that long in business by being anything but. It's also a reputation that will have no doubt permeated your world somehow, as Collins Performance has become synonymous with making Fords

more powerful since its doors opened.

With a solid focus on Fords, Collins is highly respected. So much so that it was (and in fact still is) an official service centre for the RS200, that's not a facility every garage can boast about. While that's a pretty impressive arm of the business, it's merely one feather in a many-feathered hat. Over the years, Collins has worked on ships, on trucks, on other brands of cars and more. Basically, if it's something they >



think they can turn their hand to, they will without issue.

Collins Performance isn't just a shop, it's not somewhere that offers shelves of shiny parts and nothing more. Nor is it simply a place that fits parts to cars. No, Collins Performance is a centre for development, for research and for creating new and exciting products. For example, all the mounts, dump valves, quick shift kits... they're all made in-house. It's British engineering at its best, which we're all for. The same goes for the exhausts, too, in the form of Mongoose, which is a Collins brand along with Magnex, the latter of which

we proudly have on our project Focus ST, thanks chaps!

That's why we like this place. It's progressive, proactive rather than reactive. Collins looks for opportunities to make things and develop parts, which is something the industry is always in need of and something that you, as the paying customer at the end of it all, will always be grateful for. There's a certain peace of mind that comes from knowing you've spent your money wisely.

Then there's the electrical side of things. The team at Collins has spent endless man-hours writing and developing software





for remaps, but that's not a recent thing - they were at it way back in the '80s, when most tuners were scared of opening the little black box. Collins Performance demonstrated no fear though, and delved into the world of more power via circuitry. This has evolved into the CP Flash for Fords or Powerchips for other brands. Offering a wide range of tuning options, Collins can offer something for almost every car and customer, and they can install it lightning fast, too - it takes just 17 seconds to upload software to a Focus RS!

There's the testing element, too. In the workshop you'll find an engine-building room and an engine dyno, so that completed power-plants can

be tested properly before they're bolted into the car. Then, once in the car, there's the Superflow 800 Series four-wheel dyno. There are only a handful of these in Europe, and they reside with clients like Bentley - it's seriously high-end kit to make sure the results are as accurate as possible. With a 200mph rating and the ability to cope with 1,500bhp per axle, it can happily handle even the most insane of Fords!

All this dedication to in-house development and testing isn't restricted to the equipment on offer, in fact, the equipment is there so the team can hone their own offerings before releasing them to the public. The ST upgrade kits have >





all been developed on Collins-owned cars, and that development means that they've done real road miles and been subjected to real driving. That way, when the kits go on sale, they're a known quantity and their performance can be verified with ease.

Current development at Collins is a little more left field care of a Ford without an ST badge. The goal at the moment is to see how much power can be safely extracted from the 1.0 EcoBoost motor in the Fiesta. A popular car for young drivers, Collins are getting into the high hundreds now in terms of BHP, which will mean a world of opportunity for owners once an upgrade package has been finalised.

As you can tell, the main aim for Collins is to bring things to the masses via lots of careful and thought out research and development. They have the facilities at their disposal and the skilled employees get the most out of them. Plus, it makes sense to put all that time and effort into projects that will be available to a wide market. However, that's not to say that they won't take on one-off, bespoke projects for people, it all depends what you want. If you're after something special, it could be well worth picking up the phone to see what's on offer to you.

Basically, if you're after a dump valve, a CP Flash remap, an exhaust or a full conversion to fire-breathing specification, Collins is the place for you. They live and breathe this stuff, and have done for the best part of four decades. It's special to find a business so focused and so dedicated to the cause – not everyone offers the same level of development for products, many just stock it and sell it. It's the way in which Collins Performance operates that truly makes them a Performance Lord. ☐



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Rallycross

Ooh, there's controversy and drama whenever banger racing is mentioned. Not here though, we just like smashing cars into other cars – here's how to get involved!

JIM BLACKSTOCK BRITISH RALLYCROSS

There are some crazy forms of motorsport out there, many of them originating in countries that spend much of the year in utter darkness and poaching in a sea of Vodka. Driving jeeps across the surface of lakes or drag racing tractors being two that spring to mind.

However, one of the most exciting to watch is rallycross, which pits cars based on those competing in the FIA World Rally Championship against each other – not the clock – on circuits made up of both gravel and asphalt.

Rallycross has enjoyed something of a resurgence in recent years, buoyed by drivers such as Ken Block, Petter Solberg and Travis Pastrana walking away from stage rallying for the more compact and visually appealing (as well as sponsor-friendly) world of Rallycross.

BACKGROUND

Contrary to popular belief, rallycross didn't start off the back of the cancellation of stage rallying in general in 1967 due to foot and mouth disease but actually, several months beforehand. It was developed specifically for TV, to blend the excitement and drama of rally cars in action in an environment that could easily be televised – the nirvana which still evades popular media today.

The first events took place at Lydden Hill in Kent, just outside Dover, and eventually went on to use circuits such as Croft near Darlington and latterly, Brands Hatch, which hosted the annual rallycross Grand Prix for several years.

The sport has somewhat ebbed and flowed over the years, its last hey-day being in the early-to-mid 1990s, when drivers such as Britain's Will Gollop, Norway's Martin Schanche and Swede Kenneth Hansen ruled the roost.

Around the same time, there was a fair crossover with European ice racing, with many drivers competing in European rallycross in the summer and ice racing over the winter.

In 2010, rallycross was introduced into the X-Games and instantly it became cool and extreme, with Colin McRae famously just losing out to Travis Pastrana in the inaugural competition. It has since grown in stature, with two 'world' series – the FIA World Rallycross Championship and the Red Bull Global Rally Cross series.

Like buses, you wait years for a decent rallycross series and then, two come along at once!

REGULATIONS

There are numerous classes in both the world titles but at national, UK level, the



starter classes in the MSA British Rallycross Championship are the Stock Hatch category, for two-wheel-drive cars that were in production as of 1 January 1995 and the Hot Hatch class, for cars in production since 1 January 2003 and with more than two valves per cylinder.

The basic technical regulations are as you'd find in many Hot/Stock Hatch series for circuit racing or rallying; fundamentally, performance-enhancing modifications are limited and safety-based mods are strictly policed, to put the emphasis on driver ability, fun and value for money, so that those with the biggest budgets aren't necessarily the ones most likely to win.

A roll cage meeting MSA standards must be fitted. Additional bars can also be fitted according to MSA and championship regulations. Window nets must also be used.

Seat, harness and fire extinguisher corresponding to MSA regulations must also be fitted and the driver must be able to exit the vehicle from a fully strapped-in position in five seconds or less.

The engine must be fundamentally standard. Minor modifications are allowed, such as baffled sumps, rebuilds using oversize pistons, cylinder head skims for maintenance only and ECU chips are free, as are rev limits.

Transmissions must be standard and even if the original car used an LSD from the factory, this must be removed.

Suspension must remain mounted to the standard points with standard bushes – no rose joints. Coil-overs are allowed, as are adjustable dampers but only single adjustment, not double. ➤





Brakes must be standard but pad material is free.

Turbodiesels can be used but very little is allowed in terms of tuning. Smoke must be kept 'to a minimum'.

Wheels are standard specification unless unavailable to suit control tyres, which may or may not be used. If not, then anything from the MSA Blue Book Lists 1A and 1B and must be road legal.

YOU

To start racing, you'll need an MSA National B Competition Licence. That means an ARDS test to certify you are competent to race. You'll also need MSA-approved flameproof overalls and an approved helmet – open or full face, depending on your preference and fireproof undies, balaclava and boots are heavily recommended.

Then get yourself along to a race meeting in person if you like the smell of brakes and tyres or Eurosport if you prefer the comfort of your own armchair to witness the action in the British series. This will give you an idea of what's involved with up to eight

cars competing in the final after a series of heats and semi-finals. As a competitor, it's a pretty cost-effective form of motorsport with several races over the weekend if you're any good.

Each race lasts several laps, with each driver having to take one 'Joker' lap, which is a longer route than the usual lap. This shakes the competition up and makes sure that if one driver stretches an early lead, it brings the cars back together to maintain close racing.

Rallycross is a non-contact form of motorsport but inevitably, some contact can and does take place. The key is to try to avoid it wherever possible because it will always cost you dearly if you get caught up in a fracas. It could also jeopardise your chances of getting out in another heat or one of the finals later.

If you get into it and progress, then you could upgrade to the highest class of the series, the Supercar category. These are 600bhp, turbocharged four-wheel-drive monsters capable of hitting 60mph from rest in a couple of seconds. But while the stakes get higher, the excitement, particularly for the participants, remains just as tangible. ☐



LINKS

If you want to know more about rallycross, then check out the following:

rallycrossbrx.com

The MSA British Rallycross Championship has classes to suit all drivers and budgets. It travels the length and breadth of the country.

clubmansrallycross.weebly.com

The BTRDA Clubman's rallycross championship follows a similar format to the MSA championship with starter classes right up to supercars.

www.redbullglobalrallycross.com

Dude, the 'Merican take on rallycross, with Ken and his Bros... Shah, for sure, it's rad'...

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LEE WESTCOTT

This Focus RS is Lee's fourth Focus (he's also had three STs) that he bought new four months back from RS Direct. We'll let Lee take it from here: "She is a rarer 2011 car and was in good condition but looked every bit the 15k miles she had already covered. After much puppy dog eyes at the missus I purchased the RS and immediately went to work. The plan: get her looking as

close to factory fresh as possible given my limited cleaning and modding skills, not to mention my empty bank balance!"

So, what's he done so far? First, Lee fitted lots of original parts. Four new tires, new discs and pads, new wipers, OEM floor mats, bonnet moulding, dust caps, tailgate badge and original silver alloys.

After the car was effectively reset,

Lee got modding. "It's got a full Revo Stage 4 conversion with all the hardware, AS inlet plenum, carbon fibre bonnet vents, front splitter, Eibach springs, Eibach wheel spaces 15mm front / 20mm rear, engine torque mounts, Samco hoses and plenty more. Lots left to do yet, the underside needs a damn good sorting out but getting there!" We think it looks pretty much there already, Lee!



JOHN JAMES

John's Focus ST225 Sea Grey 5-door with gold wheels is a good looking - it's kitted out with Zunsport grilles, ST parts splitter, diffuser, bonnet vents and wing vents. It's not all about the looks though; it is lowered on cobra springs with Eibach spacers so it handles well, too. John hasn't forgotten the engine either, with



some upgrades in the pipeline, looking to upgrade to Collins 320 package in the near future.

DAVE STOREY

This 2007 ST belonging to Dave Storey has upgrades in the way of Bluefin Stage 3+ map, 3" Miltek Turbo Back, Auto Sport intake, Roadsport cooler, RS plugs and clutch and 19" Cosworth Kahns. It's outputting a whopping 310bhp/377 torque! Nice work!





BEN CORK

This Devil Developments-tuned Fiesta ST belonging to Ben Cork now produces a comfortable 171bhp, with the help of a full Scorpion exhaust with decat, 60mm throttle body and

Mountune CAIS. It's got some pretty neat visual upgrades, too.

Those are factory stripes, and under the hood there's a blue carbon fibre dipped engine dress kit with a Mountune theme

throughout. There's more colour in the way of yellow Focus ST170 front and rear brake upgrade and Recaro Sportster CS full blue/white leather interior with ST and Recaro embroidery. Very neat ride, Ben!



VICKI KEEBLE

Vicki's Focus ST170 has been modified with a Milltek decay/flexy combo, stainless steel cat back,

K&N panel filter, along with some body mods including EGR bodykit, 17" team dynamic pro race 3s, Koni adjustable shocks and springs and Mondeo callipers.



JUSTIN MERRALLS

Justin's Mondeo ST TDCi looks great, and has some of the essential upgrades under the bonnet, too. "I actually work for the company that prints Performance Ford every month, so I'm lucky to get a sneak peek before most. That alone means that my car deserves a spot in your magazine! The car has been de-catted and fitted with a full stainless exhaust, larger intercooler and been has re-mapped." We agree, so you're in the mag! Say hello to our friends at the printers...





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FLEET

The entire goings on from the world of the motors we have at our disposal. There may be occasional outbursts of rage due to problematic repairs – we've all been there!



CHRIS POLLITT
FOCUS ST

THIS MONTH'S BEST BIT

Taking it for a blast after weeks of it lying idle. It really is a hoot to drive.

THIS MONTH'S WORST BIT

The dreaded slow turn of the engine and the warning lights when I tried to start it, sorry car!



COSTS

Nil

FORGOTTEN FORD

There's not a lot to tell you this month. It's been busy in the house of Ed, again because of the summer holidays. As such, all I have is a Focus ST and a collection of parts waiting to be fitted. I guess the problem is that when it's in the garage it's a case of 'out of sight, out of mind', which I really must stop doing.

Anyway, the main thing is that small Pollitt is back at school now, so I have

more free time to crack on and get the suspension and brakes fitted, as promised last month. Though in an odd twist of fate, it kind of worked out because I totally forgot about the Goodridge braided hoses I have – imagine fitting the new brakes, putting the car back together, then realising I'd forgotten to install them – there would be so much rage!

The only other thing to mention is the realisation that leaving it sat in the

garage isn't doing it any good! I jumped in the other day to give it a blast and it barely started, and when it did, it wouldn't rev. A quick charge later and all was well, but it's something I need to be aware of. My garage is the size of a box of Swan Vestas, so a dead car in there would be an issue. Still, I'll try not to let it happen again. I'll also try and get some changes made by next month, promise!



CHRIS POLLITT MONDEO ST TDCI

THIS MONTH'S BEST BIT

Getting behind the wheel of a Ford again, it's been far too long. Oh, and the glorious economy, that's a bonus.

THIS MONTH'S WORST BIT

Having to get up at 5am after no sleep to get a train to Manchester to get it. That was a damn long day.

COSTS

PURCHASE £500



DIESEL POWER

Well, what do we have here? That'll be a new car for the PF fleet! Gone is my old daily driver (an E46 BMW) and in its place sits this battered old bruiser, my 'new' 2005 Mondeo ST TDCi.

I've actually known the car for around six years, as it's been the trusty steed of a good friend for that time. He's also a car guy, which means that the old ST has been looked after (mechanically) pretty damn well over the years. It's had new injectors, new brakes, a new clutch, the DPF, new tyres, new suspension and so on, so it really is in fine fettle when it comes to the grubby bits. Then there's the fact it's been re-mapped, it's got a de-cat pipe and there's a Cobra Sport exhaust on there, too. Oh, and a tow bar, just in case I feel the need to buy a caravan (that was a joke, calm down).

I've always been a massive fan of the Mk3 Mondeo, having used them lots over the years. Not only are they comfy and, generally speaking, reliable, they're also surprisingly good fun to throw around for a big old bus - something that I'll be keen to capitalise on in coming issues.

However, there are some negatives to deal with first, we are talking about an old Ford here after all. First of all, for all the mechanical love, there's been a lot of bodily neglect. Nothing to do with my mate, it's just based around this always being a working car. As such, there's some rust on the back arches, the rear bumper needs adjusting, the covers are missing

off the headlight washers, there's an ugly scratch down the side of it and all the jacking covers are absent. Little things, but they all add up. However, I'm not too bothered about that, as I can get them sorted fairly easily.

The first thing I'll be doing, after a wash, is getting the alloys sorted. I'm not sure what Ford was making wheels out of in the mid '00s, but it was crap. All four are pretty badly corroded, which really lets

the car down in my eyes, so I'll get them done first.

After that, who knows? It's my daily, so I won't be going mad. But still, an intercooler, a better turbo and maybe some better suspension wouldn't be bad additions. For now though, I'm just happy to be back in a Ford every day. Oh, and I'm also happy for another reason... this road-ready ST TDCi was, wait for it, £500. I loves me a bargain.





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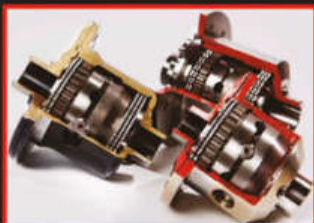
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JIM BLACKSTOCK PUMA 1.7i 16V

THIS MONTH'S BEST BIT

The bloke handing over the clean MOT certificate with nothing in the 'Advisories' box.

THIS MONTH'S WORST BIT

The 25-minute wait, listening to Radio 1, while the guy tested the car. The tension was tolerable, the Nick Grimshaw show wasn't...



TESTING TIMES

Not masses to report this month – car fun is always a little thin on the ground during school summer holidays.

I did have to take the Puma for its annual MOT test – that's always a slightly harrowing experience. I know the car fairly well now, having been underneath it a few times and had at least all the suspension and brakes off and replaced, so I know that they're all in reasonable shape but you never know how zealous a tester can be.

So there I sat in the waiting room, listening out for the cartoon-like toot of the Puma's horn. After what seemed like an eternity, it wafted out of the workshop, indicating some degree of success.

After another eternity, the tester came out, sat at the desk and started writing. "OK?" I ventured. "Yeah, fine..." was the reply and a sigh of relief on my part.

Deep down, I knew it would be Okay but there's always a twinge of worry. But anyway, no advisories, no worries, so we're good for another year...

Taking it for the MOT meant another chance to take it out for a drive, as did this month's set-up How To feature. And once again, I find myself having to change the way I drive completely.

My daily drivers for years now have been turbodiesels; masses of low-to-mid-range torque, everything over by the time you get to 4,000rpm if you even bother hanging on to the gears that long and not so much moving the stick in between the front seats.

First couple of miles in the Puma, to go anywhere, is on residential streets, so pop it in third and trundle along the pothole-littered roads. After a few moments of

this, we hit dual carriageway and the kind of roads the Puma was built for.

Instinctively, I find myself upshifting at around 3,500-4,000rpm, and not surprisingly, the thing feels like it's on two cylinders. I have to consciously remind myself it's an aspirated petrol motor with variable timing. So I hang on to the gears and, of course, it wakes up; it starts to breathe properly and come to life.

It is an alien feeling, for someone who's been in oil-burners for so long, to hang on to the gears until around 6,500rpm or so. But the noise from the induction kit, which sounds fantastic and really loud but in reality, can't be heard outside the car, just builds and it actually only takes a roundabout or two to get back into driving the little rocket.

You have to work at it to get the best from it, which makes a nice change from the all-too-easy modern life. You can't just leave it in fourth gear and plant the throttle and expect the car to do everything – you have to get it on-cam, you have to work with it and then the smiles come. And boy, do they come...





DAN WOODROW F4 TEAM BOSS

BRANDS HATCH BEST BIT

It stayed dry! And dry all weekend!

BRANDS HATCH WORST BIT

Not enough testing time on the GP layout.



TWO MEETINGS MEANS TWO UPDATES!

1) BRANDS HATCH GP

After a three-week break from the first Snetterton meeting in July it was time to tackle the GP layout at Brands Hatch as part of the British GTs. It was always going to be a tricky meeting for the team, as we didn't have the experience nor the set-up information for the GP layout. This was made even harder for the team as the normal Friday test day would be on the Indy layout – which is a totally different beast to the GP.

The team would see the GP layout for the first time on Saturday morning when we would have a 20-minute practice session. The team walked the track on Friday night to evaluate what they would do with the car for the weekend.

Testing on Friday would see the car run the last meeting's tyres to gather some further data about the track – well at least half of it! It would also allow for James, our driver, to try and find out about the three corners which would feature when the layout changed to the GP layout the following day. James's best performance on the day would come in session three when he achieved a lap time that was 1.7 seconds from the pace man. It was a tough day as we had one eye on the GP layout and one eye on the day's testing.

The team made the decision to use a new set of tyres for the Saturday morning session (we would go on to use these for the Friday test day at the next meeting). James's first look at the GP loop was Saturday morning – the team made a number of changes to the car overnight. With the morning session on the GP loop over, James managed a lap time that was 5.8 seconds from the pace man, the field was very spread out in terms of times, so we had a lot to do to try and get James into the fight ahead of him.

Qualifying started at 12:10, it would be tough as the team didn't really know how the changes would go. James managed to improve from his first practice on the GP

layout and ended the day just over 4 seconds away from the pace man averaging just under 100mph.

Race One on Saturday started at 3:50pm, James managed 14th place, closing the lap time to 3.9 seconds to the fastest driver, so a lot of progress made and getting faster and faster with each race session. James was only 2 tenths away from 13th place after a close fight saw him lose out on 13th on the last corner.

Race two on Sunday morning was a 10:55am start and with my changes over night they hoped it would have a positive effect. James finished 14th again, but his lap time was a lot closer to the fastest, improving the gap to under 3.5 seconds.





Race two started at 4:30pm where James closed the lap time gap to 2.6 seconds, which enabled a 16th place finish. James averaged again slightly under 100mph around the Brands Hatch GP track.

Team manager Dan Woodrow added "It was always going to be a very hard weekend with not being able to test on the same track that we race on. The 20-minute session on Saturday morning wasn't really long enough for us as a team to get the car ready set-up wise, we are a very young-based team and also we've only had this car for months rather than years like most of the teams. We also forget that this is still James's first season as a racing driver in cars after only starting racing karts three years ago at club level."

2) SNETTERTON

With only two weeks between the Brands GP weekend and the second visit to Snetterton it was a quick turnaround for the team. They would arrive late Wednesday night and still be putting the awning up at midnight. After a quick break and a trip to a popular fast food takeaway the last few bits were put in place and they turned in for the night.

Like last time, the team elected to test on both Thursday and Friday to enable James to get himself dialled back in to the track and car. The team did experience transponder/timing issues during

Thursday and Friday so didn't appear on the official timing screens, only the team's own timing with their mobile phones. It was a tough couple of days, as the team couldn't really find the sweet spot - the spot the car was in at the previous meeting. James would be around 4 seconds from the fastest driver during the two days. We fitted used tyres on Thursday and then the tyres which James

used for the 20-minute practice session for the Saturday at Brands Hatch. The first time the team would use new tyres would be Saturday morning qualifying.

Again it was another late night to try and get rid of the understeer, which James was feeling during the two days testing. James would finish his qualifying session in 18th position ➤





DAN WOODROW F4 TEAM BOSS

SNETTERTON BEST BIT

Dry races and an 11th place with good lap time.

SNETTERTON WORST BIT

Not getting the best from the car.

with a lap time that was 5 seconds from the fastest driver. It was truly a big disappointment for both the team and driver – after the success of the last visit to Snetterton this could have and should have been a much more successful session!

For race one, which started at 2:22pm, it was a lovely day, which we hoped would be the case for the full weekend. James started and finished in 18th position – evidently the changes we made to the car couldn't help James further up the grid. The team had a lot of work to do, what with the car having some damage which took them a couple of hours to get sorted. We hoped Sunday's race two and three would see an upturn for the weekend.

Race two was a 10:37am start and the team made a number of changes overnight to hopefully get the car working as it should. Thankfully it was another dry day, the rain, according to the forecast, would come at some point but we did a sun dance in a bid to keep it away at least for our two races. James, during an action packed-race, managed to climb seven places and finish in 11th place. His lap time was also a lot better, achieving a time that was now only 2.1 seconds from the fastest driver.

Race three, which was round 18, started at 3pm and it looked like the rain could come at some point during the race, thankfully it didn't, but boy when it came it really came! James finished 18th after starting 18th due to the fastest laps and how the grid is formed for the races. James's lap time dropped slightly slower to just over 3 seconds from the pace driver, but finished just over 10 seconds behind 13th position.

That was the end of the meeting for the team and just as they had started packing the car and tools/equipment the heavens opened and the rain came down! After only 4 minutes of rain the paddock area

was flooded and the team got soaked! Thankfully though it came after the race and not during it!

Team manager Dan Woodrow, added "It was a very testing weekend for us, we've been here for five days – it feels like 10! I'm very happy with the 11th place although I feel we missed a opportunity to get better finishes but hey, this is motor racing and we move on to another very tricky track for us. We haven't seen Donington as a team for three years and James hasn't seen it with his eyes other than on TV and his computer, it will be hard but we will give it our best shot."



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Cost: £99.99

Contact: www.sunnycamglasses.com

Racing, drifting or simply cruising around town, it's great fun to record your experiences in HD - that's why GoPro videos have swept the world. Keen to get in on the fun, these Sunnycams caught our eye, offering point of view footage at HD resolution.

The Sunnycam glasses allow you to record in HD without taking your hands off the wheel and comes with no complex brackets or expensive extras. They record in HD video, record audio and take photos. The camera, located right between the lenses, allows you to record point-of-view footage for recording on the move - great for on the track.

To run through the techy features, they record in 720p HD (1280 x 720) video, photo resolution of 1600 x 1200, a recording speed of 30fps, a potential capacity of 32GB memory card (16GB

card included) and a rechargeable built-in lithium-ion polymer battery.

The results are actually very good for such a keenly priced product; the images are sharp and the sound recording isn't bad either. In the box you get a charging cable, Micro SD adapter and interchangeable lenses, which is everything you need to get going. With the controls built into the frame, they're straightforward to use and we managed to get around three hours' recording time.

Although we have confidence in the electronics, the frame doesn't seem the strongest, and the bulky arms would make it a challenge to fit under a helmet. That said, at this price, and with nothing quite like it on the market, we feel its positives outweigh its issues.

"Great HD recording and nice price"

PERFORMANCEFORD RATING



NOTE:

Last issue we reviewed Wonder Wheels U Trigger, but we made a couple of slip ups! Firstly, it's available from £6.00, not £15.00 as we stated, so it's even more of a bargain. Also, keep this one for the alloys; it's no good on your classic Ford wires or chrome wheels. Now go pick some up, it's a five star product!



SCHUMACHER INTELLIGENT SPEEDCHARGE® BATTERY CHARGER SCI15 15 AMP 6/12V

Schumacher is one of the world's biggest manufacturers of battery chargers, selling in the region of 3 million a year. A great pedigree for the Intelligent SpeedCharge® Battery Charger we put to the test this month.

The bump told us that the patented SpeedCharge® technology actively monitors the charge acceptance and constantly modifies the charge output. Not only that, it charges the battery up to 3 times faster than conventional battery chargers without damaging it.

We liked the sound of this, especially as we had a particularly flat battery that had been used on some electric fencing and needed to go back on very quickly. The charger read that it had an 8% charge and very quickly set about boosting it up.

Having set it going, we thought perhaps we should just double check the settings. This was where we came a bit unstuck. Our flat battery had no indication of its type. We assumed it was calcium, and set it up as such but there were a few jitters, such as the speed at which the % charge was going up as shown on the LCD display.

There were a couple of other buttons and lights on the charger that were not immediately obvious to the user, and frustratingly couldn't be found in the owner's manual. After a couple of hours the battery was showing an 80% charge and we decided to switch it off and put it back on the fence. Suffice to say, the horses were impressed with its performance, delivering a hefty kick to a curious nose!

Other benefits of this bit of kit include a de-sulphating mode for completely exhausted batteries; an automatic float mode that ensures batteries are kept fully charged and ready to use for extended periods of time; automatic voltage detection to determine whether the charger is connected to a 6V or 12V battery and reverse polarity and auto shut-off.

It's got all the bells and whistles this one – just wish we could work out how to access them!

“Speedy charger but instruction manual lets it down”

Cost: £93.54

Contact: www.sealey.co.uk

PERFORMANCEFORD RATING



T-CUT METALLIC

Cost: Around £7.99 **Contact:** www.t-cut.co.uk

Honestly, what is the point of testing something that is so well known that it has become the generic name for all products that followed? T-Cut has been around for in excess of 50 years, but in that time, paint has changed. So, it follows, has T-Cut. We tried out the metallic version, and it's obviously been a long while since we last used it – we remember when it would leave your hands the same colour as your car.

We tried it on a metallic car with a clearcoat, and the results were pretty good. It wasn't mind-blowing, but we watched the minor surface abrasions disappear before our eyes. Even in direct sunlight it buffed off beautifully and left the surface ready for wax.

T-Cut is still the generic name for cutting compounds, and has the big advantage of being cheap and widely available, even at supermarkets, and this Metallic version seems to work a treat.

“Widely available and does the job well”

PERFORMANCEFORD RATING



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ANDY ROUSE

It's not every day that you get to chat with a motorsport legend, so PF had to jump at the chance to have a natter with BTCC and Ford hero, Andy Rouse.

CHRIS POLLITT ✎ VARIOUS

I

It's no secret that there are a lot of great names behind the Fords that have competed over the years. One such name is Andy Rouse, a man who has piloted many Fords in his time including the monstrous Sierra RS500, the Mk1 Escort, and of course, the ICS BTCC Ford Mondeo. PF managed to bag 10 minutes with Andy to find out what it's like to be considered one of the greats.

WHERE DOES YOUR PASSION FOR TOURING CARS COME FROM?

My interest in racing as a schoolboy was focused on F1 because in those days there was no other racing on TV. So my ambition was to race single-seater cars. I had no interest in saloon car racing at that time and started racing by building my own grass track car and eventually moving on to Formula Ford as funds permitted. I was doing quite well racing in the West Country when Dulon offered me a works supported chassis deal, so I then decided I needed a professionally prepared engine. I contacted Broadspeed – who were offering FF engines at the

time – to ask about a deal on an engine and Ralf Broad asked me to go and see him. The outcome was an engine on loan and a job at Broadspeed. So I moved from Gloucestershire to the Midlands to work at Broadspeed who were at that time running Ford Escort saloon cars on behalf of Ford in the British Championship. I was then racing in FF and working on saloon cars but it soon became evident that Ralf wasn't that interested in FF, so I realised that if I wanted to make progress with my driving career I needed to be driving a saloon car. Luckily, at that time the Escort Mexico championship was just starting and Broadspeed were a Ford Dealer, so I convinced Ralph to do me a deal on a car, which I prepared and raced in Broadspeed colours. Once I started to race successfully with a roof over my head I knew I had found my true vocation, and the rest is history.

WHAT WAS IT LIKE TO BE INVOLVED IN THE SPORT AT WHAT MANY WOULD CALL ITS PEAK?

The Touring Car Championship started to become popular and grew to become the UK's premier race series as a result of the TV coverage on BBC Grandstand. I was part of the group of entrants who set up TOCA to run the Championship and develop it into the great success it became in the '90s. My racing life had always been hectic but in the '90s it became doubly so because I was competing in the Championship, running my business building racing cars and was involved in running the Championship, which for some time was carried out from our offices in Coventry. This was all very good because things were going well on all fronts but the downside for me was that the racing became increasingly competitive as more international and professional drivers took part, which made for great racing but it became more and more



difficult to win. Anyway, I had won 60 races by the mid '90s so I eventually retired at the end of the '94 season at the age of 46.

HOW DID THE RELATIONSHIP WITH FORD AND LATER, THE MONDEO COME ABOUT?

My relationship with Ford went right back to the Broadstreet days when I won the Mexico Championship and then raced a Group 2 Escort in the BTCC. We were one of the leading touring car teams in the '80s and I had won three touring car championships so when Ford decided to race their new model, the Sierra, they contacted us about racing it in the BTCC, which we did, and I won the series for the fourth time in 1985 with the XR4Ti Mercur. When, eventually, the Mondeo came along Ford asked us to race it in the BTCC. We ran Mondeos for three years and scored 36 podium finishes, two World Cups and Ford's 200th win in the BTCC.

WHAT WAS YOUR INPUT INTO THE DEVELOPMENT OF THAT CAR?

We designed and built the cars and developed the early V6 engines before the Cosworth version became available. After our first World Cup win, we built 13 new cars in 1993 for teams in various European countries and as far afield as South Africa.

YOU'VE HAD A LONGSTANDING HISTORY WITH FORD, BUT WHICH WAS YOUR FAVOURITE TO COMPETE IN?

My favourite Ford race car was of course the RS500. It was a challenging car to drive because it had an excess of power over grip and was capable of 185 mph on circuits such as Bathurst and Fugli. Its handling suited my driving

style, having developed my driving skills in oversteering grass track cars.

HOW DID YOUR TAKE ON THE SAPPHIRE RS COSWORTH COME ABOUT?

The BTCC had become very popular on TV, sometimes pulling 3 million viewers, so the exposure was perfect for launching our own version of the Sierra Sapphire Cosworth, the Rousesport 304R. The Sapphire was an executive type of car so we developed an upgrade to enhance its style and performance and marketed it through the Ford RS dealers. We produced about 85 cars before the BTCC rules changed to Super Touring and we changed our allegiance to Toyota in the absence of a suitable Ford race car.

DO YOU STILL HOLD THE KEYS TO ANY OF YOUR OLD RACE CARS TODAY?

No, we were in the business of making and selling racing cars, keeping them didn't pay the wages.

WHAT'S YOUR TAKE ON THE BTCC TODAY?

I don't follow it much these days but it is good to see it has regained its popularity after a period in the doldrums.

WITH THE GLOVES HUNG UP, WHAT FILLS YOUR DAYS NOW?

These days I run a rental property business and my spare time is spent on my boat, my motorbikes and working on my '67 Cadillac.

CAN YOU TEACH US HOW TO BEAT JASON PLATO?

You should ask Matt Neal this question, he's threatened to do it in the pit lane on more than one occasion. ☐

RACE

Rally and Competition Equipment

NEW FABRICATION AND SUSPENSION PARTS MK1 AND 2 ESCORT

"OVER A 30 YEARS", IN MOTORSPORT WE HAVE MANAGED TO BRING TOGETHER THE FINEST SELECTION OF HIGH QUALITY FABRICATED COMPONENTS, YOU WILL BE HAPPY WITH CLUBMANS OR WORKS SPEC PARTS. ALL PARTS HAVE BEEN DEVELOPED, TRIED, TESTED REPRESENTING TRUE VALUE FOR MONEY.

BODYSHELL, GRP4 CLUB SPEC

4 LINK KIT REINFORCED BODY BOXES 5/8 JOINTS, BUSHES, SPACERS & BOLTS	£275
4 LINK KIT HEAVY DUTY C/W BIG BUSHES, 5/8 JOINTS, M14 BOLTS. TO SUIT ESCORT RUNNING REAR COIL OVERS	£275
BODY BOXES REINFORCED	PR £72
4 LINK TO CHASSIS SKIDS	PR £16
PANHARD ROD KIT ADJ 5/8 COMPLETE	£81
PANHARD ROD KIT FIXED TOWER	£75
PANHARD ROD ADJ L/H TOWER	£36
ANTI TRAMP BAR KIT MK1	£105
ANTI TRAMP BAR KIT MK2	£97
SQUARE TALL REAR TURRET BOXES	PR £42
TURRET AND ANTI TRAMP AXLE BRACKET	EA £3.50
LARGE GEARBOX TUNNEL	£45
ALLOY SURROUND GAITOR PLATE	£16
FUEL TANK PLATFORM, TO SUIT SHAPED ALLOY TANK C/W STRAPS	£88
DRY SUMP TANK, MOUNTING PLATFORM	£25
4 LINK CROSS BRACES (BODY BOXES)	PR £17
GROUP 4 MK2 FIREWALL KIT. FITS WITH TURRETS INC BOOT INFILLS	KIT £78
MK1 & 2 NONE TURRET FIREWALL ALLOY PLATE	£46
SPRING HANGER SKIDS	PR £10
BOTTOM RADIATOR CUT OUT £12 + GUSSETS	£18
TOP RAD MK2 GUSSET PANEL	£28

BODYSHELL, GROUP 4 WORKS SPEC

4 LINK BODYSHELL KIT INC. BRACKETS, COVERS, SKIDS, LONG LINK BOLTS/TUBES AND CROSS BRACES MK2	£160
4 LINK ROD GRP4 SPEC 1/2 BUSHED	£42
4 LINK ROD GRP4 SPEC 5/8 BUSHED	£46
MK1 GRP4 SHORT LINK BODY BOX KIT	£114
GRP4 MK2 4 LINK KIT. COMPLETE	£500
GRP4 PANHARD ROD KIT. L/H OR R/H TOWER	£130
GRP4 PANHARD ROD TOWER. MULTIPIECE, LH OR RH WORKS SPEC	£58
GRP4 ROUND REAR TURRETS	PR £98
ZF GEARBOX TUNNEL COMPLETE	£100
BULKHEAD PLATE 1 PIECE	£13
BULKHEAD PLATE 3 PIECE	£19
ATLAS LONG DIFF TUNNEL	£20
BULKHEAD GUSSETS 1 X SHAPED	PR £32
FRONT CHASSIS SKIDS	PR £20
CHASSIS TO SILL SKIDS	PR £20
STRUT TOP REINFORCING PLATES GRP4	PR £58
REAR INNER STEEL ARCH INFILLS	PR £16
SEAT SUB FRAME MOUNT KIT (WELD IN)	£40
WELD IN FRONT CROSS MEMBER CHASSIS INSERTS SET OF 4	£26
15" INNER REAR WHEEL ARCH TUBS	PR £230
MK1 WORKS STEEL ARCHES	SET £520
ROLL CAGE TUBE 2 METRE 38MM	£30
GRP4 WATTS CHASSIS BRACKET KITS	
MULTIPIECE FORMS BOTH SIDES	£114
GRP4 WATTS BARS GOLD BUSHED	PR £81

STRUT BRACES

GRP4 STRUT BRACE KIT WITH WELD ON BRACKETS AND STEEL BAR PLATED	£48
WITH ALLOY BAR	£70
WITH OVAL STEEL BAR POWDER COATED	£76
MK1 WORKS FLAT TYPE BOLT ON STRUT BRACE C/W BRACKETS	£48
MK2 BOLT ON ADJUSTABLE STRUT BRACE KIT STEEL OR ALLOY BAR	£66

SUSPENSION TO BODYSHELL

WORLD CUP X - MEMBER, FULL GRP4 SPEC	£395
WCXM CLUB STD OR LRM CROSSMEMBER	£210
WCXM BASE FULL GRP4	£325
WCXM BASE CLUB STD OR LRM	£130
WCXM MOUNTS OHC / X-FLOW	£57
ANTI DIVE KIT	£50
DOUBLE WIDTH KIT	£50
GRP4 TENSION STRUT KIT TARMAC	£325
GRP4 TENSION STRUT KIT FOREST	£400
ANTI ROLL BAR T/STRUT 5/8	£130
3/4 150	
COMPRESSION STRUT KIT FIXED	£130
COMPRESSION STRUT KIT IN-SITU ADJ	£160
16V ASTRA CHASSIS ENGINE MOUNT KIT ALSO OHC / X-FLOW	£70
TRACK CONTROL ARMS TCA'S	
IN-SITU ADJUSTABLE TCA'S. INNER RUBBER BUSHED	PR £180
IN-SITU ADJUSTABLE TCA'S. 5/8 R/JOINTS + FITTING KIT	PR £180
RUBBER BUSHED ADJ TCA	HISTORIC PR £165
R/JOINTED ADJUSTABLE TCA	HISTORIC PR £165
RS2000 TRACK ROD END GEN FORD	£40
WATTS LINKAGE KIT ATLAS	£285
WATTS LINKAGE KIT ENGLISH	£240
PTEF SLIPPER KIT	£48
SHORT REAR SPRING SHACKLES	PR £39
U BOLT PLATES	PR £29
TWIN CAM ANTI ROLL BAR	£130
MULTI LEAF ORIGINAL FOREST	
5 LEAF SLIPPER SPRINGS	PAIR £210
SINGLE LEAF TARMAC SLIPPER SPRINGS 146LB	PR £225
TARMAC MULTI LEAF SLIPPER SPRINGS	PR £210
CD6 MK1 4 LEAF TWIN EYE SPRINGS	PR £210
MK2 SINGLE LEAF TWIN EYE 146LB SPRINGS	PR £225
MK2 MULTI TARMAC LOW TWIN EYE SPRINGS	PR £200

STEERING AND BRAKES

(ALL PEDAL BOXES HAVE GENUINE GIRLING MASTER CYLINDERS)

MK2 BIAS ADJ PEDAL BOX CABLE	£290
MK2 BIAS ADJ PEDAL BOX HYD	£355
MK1 BIAS ADJ PEDAL BOX CABLE	£340
MK1 BIAS ADJ PEDAL BOX HYD	£400
GRP4 THROTTLE PEDAL	£40
TUBE DASH ADJUSTER	£29
FLEXIBLE CLICK DASH ADJUSTER	£33
ALLOY RESERVOIR BRACKET	FROM £16
AP RESERVOIR + BRACKET PUSH ON	£18
GIRLING RESERVOIR THREADED	£18
HYDRAULIC HANDBRAKE KIT	£70
ALLOY PRO HYDRAULIC HORIZONTAL HANDBRAKE COMPLETE	£122
VERTICAL PRO ALLOY HANDBRAKE	£145
BIAS PROPORTIONING VALVE SCREW TYPE	£60
MK3 ESCORT REAR CALIPER MT BRACKETS	PR £20
SIERRA REAR CALIPER MT BRACKETS	PR £25

GENUINE AP DISC & CALIPERS

MONTE CARLO ESCORT CALIPER	EA £690
MONTE CARLO AP BRAKE DISC	EA £170
FOREST AP ESCORT CALIPER	EA £625
FOREST AP BRAKE DISC	EA £145
GRP4 2383-2382 REAR CALIPER	EA £540
GRP4 AP SOLID REAR DISC	EA £155
AP2577 REAR TWIN POT CALIPER WITH CABLE HANDBRAKE MECHANISM FITTED	EA £340
13" AP GRP4 FRONT DISC BELL	EA £22

NEW AP RADIAL 13" FRONT BRAKE KIT FITS WITH 13" WHEELS ONTO MK2 ESCORT C/W VENTED DISCS, ALLOY BELLS, MOUNTING BRACKETS, PADS AND PIPES £1,150

AP 15" RADIAL FRONT ESCORT BRAKE KIT, 305 DISC	£1,430
AP MONTE CARLO GRP4 ESCORT FRONT HISTORIC BRAKE	KIT £1,900
AP FOREST GRP4 ESCORT FRONT HISTORIC BRAKE	KIT £1,700
101/8 X 22MM VENTED DISCS TO USE WITH PRINCESS CALIPERS. PLAIN	PR £88
OR WITH GROOVES	PR £120
PRINCESS 4 POT CALIPER SPACER KIT	£40
GRPI CALIPER SPACER KIT. M16	£35
GIRLING MASTER CYLINDER. 625 ETC	£55
RS2000 GEN FORD TRACK ROD END	£40
GRP4 CAST STEERING JOINT	£43
GRP4 CAST STEERING JOINT LONG	£43
2.8 CAPRI VENTED FRONT DISCS	PR £58
2.8 CAPRI VENTED GROOVED DISCS	PR £95

MK2 ESCORT BRONZE BUSHED H/D	
GEN FORD QUICK RACK	£230
WITH NEW LONG RACK ARMS FITTED	£260
MK2 ESCORT ALL NEW H/D K/C	
QUICKRACK RHD / LHD	£350
SIERRA REAR DISC BRAKE KIT	£395
SIERRA CONVERSION HANDBRAKE CABLE	£25

ELECTRIC POWERSTEERING KITS USING VAUXHALL CORSA MOTOR ALL BRACKETS TO FIT FORD ESCORT MK1 & 2 RHD + LHD £850

SUSPENSION AND MOUNTINGS

ALLOY 2 1/4" SPRING SEAT, 1" TALL	£10
ALLOY 2 1/4" SPRING SEAT, 3" TALL	£17
ALLOY 2 1/4" LOCK RING	£8
ALLOY 2 1/4" D SHAPE TOP CAP	£10
ALLOY 4" SPRING SEAT, SHALLOW	£29
ALLOY 4" SPRING SEAT, DEEP	£33

RS2000 BILSTEIN STRUT CASINGS GROUP 1 FIXED CUP £185 GROUP 4 THREADED ADJUSTABLE £175

BILSTEIN FRONT INSERTS

260/60 LONG	£120
300/70 LONG	£120
300/70 SHORT	£123
300/100 LONG	£123

BILSTEIN REAR DAMPERS

GRP1 MK2 ESCORT STD FIT	PR £210
GRP4 TURRETED 220/110	PR £200
GRP4 REAR COIL OVERS 220/110	PR £365

ESCORT FRONT TOP MOUNTS

RUBBER ROLLER BEARING TOP MOUNTS	EA £120
GRP4 2 PIECE CONCENTRIC ALLOY BLACK	EA £80.00
ECCENTRIC OFFSET ALLOY TOP MOUNT	EA £68.00
RUBBER TOP MOUNT C/W SPHERICAL BEARING	EA £75.00
CONCENTRIC ALLOY TOP MT FLAT	EA £65.00
HIGH ANGLE TOP MT NUT + WASHER	EA £6.50
ALLOY RBTM LOOK BLACK	EA £70
PLASTIC DUST COVERS RBTM	PR £11

FRONT HUBS STUDS + NUTS

GRP4 ALLOY FRONT HUB	£65
GRP4 FRONT WHEEL STUD	£4.75
GRP4 WHEEL NUT	£2.75
GRP4 WHEEL INSERT	£1.75
ALLOY HUB CAP STD	£8 B/B
GRP4 WHEEL INSERTS	£2.50
GRP4 MACHINED WHEEL SPACER	£9.00
STD M12 WHEEL STUDS LONG	£1.20
OPEN END M12 WHEEL NUT	£1.00
RS2000 + GHIA WHEEL NUT	£1.15
GRP4 TO STD M12 CONVERSION NUT	£2.00

COIL SPRINGS TOP QUALITY

FRONT BILSTEIN WELD ON STRUT ADJUSTER KIT COMPLETE CAR SET 2 1/4	£70
REAR BILSTEIN 2 1/4 SLIP OVER KIT C/W ALLOY SPRING SEATS + TOP CAPS	£75
RS2000 FRONT ALL RATES	FROM £50 PR
RS2000 FLAT GROUND ALL RATES	FROM £50 PR
2 1/4 ALL LENGTHS + RATES	FROM £45 PR
2 1/4 PROGRESSIVE 12" & 14" VARIOUS	FROM £65 PR
BLUE 2 1/4 HELPER SPRINGS 4"	PR £30
LOWERING BLOCK KITS, 1" - 2"	£24

ALLOY PRODUCTS

ESCORT SHAPED PETROL TANK, BAFFLED WITH TWIN TANK OFFS AND SIGHT GAUGE, C/W FILLER NECK + SPLASH TRAY	£205
ESCORT SHAPED INJECTION TANK WITH LH OR RH SUMP C/W FILLER NECK + SPLASH TRAY	£280
TARMAC ALLOY ARCHES MK2	SET £325
FOREST ALLOY ARCHES MK2	SET £318
WIDE TARMAC REAR ARCHES MK2	PR £208
ALLOY FRONT SPOILER GRP4	£75
ALLOY FRONT SPOILER HIGH LEVEL	£85
DRY SUMP TANK, BASE MT	£125
DRY SUMP TANK, 6R4 TYPE BREATHER	£210
ALLOY CRANK CASE BREATHER BOX	£49
ENGINE ALLOY UNION	£7
REAR MK2 LAMP PROTECTORS	£19
ALLOY BATTERY TRAY (240 X 175)	£42
MK2 CENTRE INSTRUMENT PANEL	£35

ALLOY SWIRL POT FUEL 1.5LTR	£110
FUEL PUMP BRACKET, TWIN FACET	£35
MK2 DASH BINACLE INSERT	£40
1 LITRE CATCH TANK 2 x 1/2 FITTINGS	£53
1 LITRE CATCH TANK C/W BREATHER	£65
2 LITRE CATCH TANK 2 x 1/2 FITTINGS	£53
RT30 BATTERY TRAY FLAT BLACK	£74
RT30 BATTERY TRAY VERTICAL BLACK	£70
REAR MK2 ALLOY BOOT SPOILER	£80
CO-DRIVERS ALLOY FOOT REST	£40
DRIVERS PUNCHED HEEL PLATE	£26

GEARBOXES

5 SPEED ZF DIRECT TOP FULL SPEC GEARBOX C/W TOWER + LEVER	£6,500 +VAT
5 SPEED TYPE 9 TRACSPORT STRAIGHT CUT 2.2 1 ST	£1,750
5 SPEED TYPE 9 TRACSPORT SEMI HELICAL 2.48 1 ST	£1,900
4 SPEED RS2000 TRACSPORT H/D STRAIGHT CUT 2.2 1 ST	£2,200
ABOVE GEARBOX ALSO AVAILABLE WITH ALLOY MAINCASE, H/D MAINSHAFTS & LAYSHAFT PINS	

NEW ATLAS AXLE CASINGS

PREPARED TO THE HIGHEST GRP4 STANDARD FULLY FLOATING GRP4 ATLAS AXLE CASING, THICK TUBE WITH STUB AXLES, DOUBLE PINNED AND BREATHER	£495
2 DIAMOND 4 LINK BRACKETS. WELDED	£60
2 GRP4 DAMPER BRACKETS. WELDED	£50
2 SPRING SADDLES, HEAVY DUTY. WELDED	£60
1 GRP4 PANHARD ROD BRACKET. WELDED	£32
2 AP CALIPER BRACKETS. WELDED	£48
FULL SPEC CASING WITH GRP4 BRACKETS	£745
2 FIF L/RINGS LH/RH	PR £32
GROUP 1 THICK TUBE ATLAS AXLE CASING WITH ORIGINAL ENDS DOUBLE PINNED AND BREATHER	£468
2 SPRING SADDLES, HEAVY DUTY WELDED	£60
2 DIAMOND 4 LINK BRACKETS. WELDED	£60
2 DAMPER BRACKETS. WELDED	£50
1 PANHARD ROD BRACKET. WELDED	£32
(BABY 48 1/2, NARROW 49 7/8, WIDE 52 INCH)	

DRIVESHAFTS AND FLANGES

TOP QUALITY GROUP 4 FULLY FLOATING HALF SHAFTS

740-770 F/F INC NUT	£140
790-820 F/F INC NUT	£150
740-770 F/F SPECIALS INC NUT	£225
GRP4 FULLY FLOATING FLANGE	£65
GRP1 2 PIECE SHAFT 18 TOOTH GRP4, 18 TOOTH BABY, NARROW OR WIDE	£150
GROUP 1 WHEEL FLANGE	£68
GRP1 BABY ATLAS / ENGLISH 16 SPLINE SHAFT	£150
HALF SHAFT RETAINER PLATE	£6.50
DRUM SPACER PLATE	£5.50
18 TOOTH ZF ATLAS SIDE GEAR	£75

QUAIFE BIG BEARING HUB KIT BOLTS ONTO ENGLISH / ATLAS AXLE C/W 16 SPLINE, 18 SPLINE SHAFTS £890

FULLY FLOATING T/T METRIC REAR HUB	£65
GRP4 F/F REAR STUD, INC BOLT	£11.50
METRIC REAR F/F HUB BEARING	£25
STEEL O RING CARRIER	£12
F/F HUB AXLE SEAL KIT	£15
STEEL SPLIT LOCK RING LH/RH	£16
REAR FF ALLOY AP DISC BELL	£30
ZF ATLAS 18 SPLINE MOTORSPORT LSD	£1200
ZF ATLAS MOTORSPORT PLATE KIT	£170
ZF ATLAS WAVY PLATE	EA £25
ZF ATLAS STEEL LSD END PLATE	£150
ZF ATLAS STEEL LSD HOUSING	£290
ZF ATLAS DRIVE FRICTION PLATE	EA £30
ZF ATLAS LSD END THRUST WASHER	EA £18.50
5.3 AND 5.8 ATLAS C.W.P.	SET £485
4.9, 4.1 AND 4.375 ATLAS C.W.P.	SET £485
5.1 ATLAS C.W.P. (BEST AVAILABLE)	£320
SALISBURY ENGLISH 22 SPLINE LSD UNIT C/W BIG SIDE BEARINGS AND CROSS PINS	£550
SALISBURY ENGLISH 16 SPLINE LSD UNIT C/W BIG SIDE BEARINGS AND CROSS PINS	£550
18 SPLINE ENGLISH LSD UNIT	£650
SALISBURY ENGLISH STEEL END PLATE	£115
SALISBURY ENGLISH DIFF PLATE SET	£100
SALISBURY ENGLISH STEEL LSD HOUSING	£160
4.4 ENGLISH C.W.P. SET	£240
4.7, 4.9, 5.1 ENGLISH C.W.P. SET	£250

NEW ALLOY BELLHOUSINGS

16V ASTRA TO FORD	£178
RS2000 CABLE	£178
RS AND 5 SPEED TYPE 9 HYDRAULIC	£210
2000E CABLE	£180
2000E HYDRAULIC	£208

BORG WARNER TO PINTO RS	£190
BORG WARNER TO VAUXHALL	£220
DURATEC TO TYPE 9 CABLE	£275
DURATEC TO TYPE 9 HYD	£300
TOYOTA 4AG TO TYPE 9	£295
SIERRA TYPE 9 SINGLE STARTER	£170
ZF TO BDA HYD WORKS TYPE	£245

INLET MANIFOLDS TWIN CARB

16V ASTRA, RED TOP, STRAIGHT	£120
N/A COSWORTH, 2 X 45/48	£120

CLUTCH AP COMPETITION

RS PINTO 8 1/2 SPRUNG PADDLE PLATE	£195
RS PINTO H/D COVER	£270
7 1/4 AP TWIN PLATE CLUTCH	£435
7 1/4 3 BLADE PADDLE PLATE	£115
7 1/4 4 BLADE PADDLE PLATE	£150
RS2000 H/D ORGANIC ROAD KIT	£295

COMPETITION EXHAUST MANIFOLDS

RS2000 GRP2 3 PIECE 2 1/4 AND 2 1/2	£155
N/A COSWORTH 3 PIECE 2 1/4 AND 2 1/2	£205
16V ASTRA INTO MK2 ESCORT	£205
X-FLOW 4 INTO 1 RALLY	£145
DURATEC INTO MK2 ESCORT	£197
16V ZETEC RWD INTO MK2 ESCORT	£167

FAST ROAD COMPETITION 2IN MANIFOLDS

RS2000 4-2-1 OHC	£145
1300/1600 X-FLOW	£115
XR3CVH 4-2-1	£122
XR2 MK1 X-FLOW	£130
THE MANIFOLD AND SYSTEMS ARE FROM STOCK. MANY MAKES AND MODELS TO ORDER.	

COMPETITION EXHAUST SYSTEMS

PINTO 2 1/2 RIGHT HAND, SINGLE BOX	£144
PINTO 2 1/2 RIGHT HAND, TWIN BOX	£152
PINTO 2 1/4 RIGHT HAND, SINGLE BOX	£122
PINTO 2 1/4 RIGHT HAND, TWIN BOX	£129
THE ABOVE ALSO FIT N/A COSWORTH/ASTRA CROSS COVER PINTO LH 2 1/4 CENTRE PIPE.	
ADD	£12

FAST ROAD COMPETITION 2IN SYSTEMS

RS2000 MK2 SINGLE BOX 2IN	£84
RS2000 MK2 TWIN BOX 2IN	£91
ESCORT MK 2 X-FLOW SINGLE BOX	£76
ESCORT MK 2 X-FLOW TWIN BOX	£84
MK 1 ESCORT X-FLOW TWIN BOX	£106
XR3 TWIN BOX WITH 3I SS END	£145
XR2 MK1 TWIN BOX 3I SS END	£130
XR2 MK2 CVH TWIN BOX	£125
SYSTEMS AVAILABLE ESCORTS MK5 + 6 +7 CAPRI, CORTINA, FOCUS, TALBOT SUNBEAM, PEUGEOT, TOYOTA COROLLA ETC, ETC	

BOLT ON SAFETY AND SERVICE PARTS

5-SPEED R/JOINTED QUICKSHIFT	£55
4-SPEED R/JOINTED QUICKSHIFT	£55
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ZF TO ATLAS H/D PROPSHAFT	£195
ZF TSTEEL GEARLEVER	£130
ATLAS AXLE 10MM ALLOY BRACE	£115
ATLAS STEEL WIDE DIFF SKID	£57
BACK COVER HALF MOON CLAMPS	£15

FIRE EXTINGUISHERS

2.25 AFF PLUMBED IN SYSTEM	£100
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2.0 LTR HAND HELD AFF	£25
2.4 LTR HAND HELD AFF SPA	£50
MK2 ALLOY Q/R LAMP BRACKETS	PR £50
MK1 ALLOY Q/R LAMP BRACKETS	PR £68
SIDE MOUNT INTO SILL QUICK LIFT SCISSOR JACK	
JACK	NEW £45

GRP4 CHASSIS MOUNT SUMP GUARD

WITH 1/4 PLATE, TARMAC	£175
WITH 5/16 PLATE, TARMAC/FOREST	£195
WITH 3/8 PLATE, FOREST	£210
NEW TYPE LONG GUARD CURVED	
WITH SKIDS GRP4 MK1 AND 2	£275
ZF GEARBOX ALLOY GUARD	£65

NEWMAN CAMSHAFTS PROVEN RESULTS

PINTO OHC FAST RD, RALLY OR RACE	£116
PADDED CAM FOLLOWERS	SET £68
X-FLOW FORD FULL RANGE OF CAMS	£100
OHC PINTO VERNEIR PULLEY	£80
MK2 POLYCARB WINDOW KITS C/W SLIDERS	
TINTED BRONZE OR CLEAR, FULL SET (AIREDALE)	
	£270
MK2 CARBON DOOR CARDS	PR £95
MK2 INNER REAR QUARTER CARBON PANELS	
	PR £80
CARBON MK2 ROOF VENT	£160
MK1 ESCORT SAFARI ROOF VENT	£130

GEAR REDUCTION STARTER MOTORS

PINTO, X-FLOW, BDA, ETC	FROM £150
HELLA H4 HEADLIGHT UNIT	£29
MK1 ESCORT BOWL AND LOOM	£29
HELLA 3000 SPOT LAMPS	£70
MK2 ESCORT MOULDED SHAPED. POLY MUD FLAPS, BLACK, BLUE OR RED, SUPERB FIT.	
SET OF FOUR	
	£130
FACET RED TOP FUEL PUMP KIT	£76
FACET RED TOP PUMP	ONLY £66
ALLOY FILTER KING LARGE BOWL	£45
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EYED BACKING PLATE	£1
BOOT SPRINGS	PR £7
BONNET PINS	STEEL £7.50
	ALLOY £9

ALLOY FOOT PEDALS SHAPED	SET £11
LIGHTWEIGHT 19MM RALLOY WHEEL BRACE	
ON BRACKET AND SPIN HANDLE	£58
GRP4 NAVIGATORS ALLOY FOOT REST	£34
DRIVER ALLOY HEEL PLATE	£15
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ALLOY SPARE WHEEL POLE, SINGLE	£18
ALLOY SPARE WHEEL POLE, DOUBLE	£30
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SWITCH STICKER SHEET	£5
DOOR SQUARES	£3.50
MUD FLAP MATERIAL, 4MM RED/BLACK/BLUE	
	£5

MUD FLAP MATERIAL, 5MM BLACK/BLUE	£15
ALLOY MUD FLAP BRACKETS	£3
ALTERNATOR NYLON STRAP AND CLAMPS	£16
STEEL THRUST BEARING CARRIER PLUS	
ROUND NOSE BEARING RS PLUS TYPE 9	
	£47
ALUMINIUM CLOTH HEAT SHIELD, 50 X 50CM	
	£12

MK2 ESCORT ALLOY GRP4 RADIATOR SUIT MOST ENGINE TYPES C/W FAN, BRACKET AND SENDER BOSS	
	£250
M LINE 280MM FAN	
	£68
SENDER UNIT SWITCH	
	£12

BDA SILICON TOP AND BOTTOM HOSE	PR £68
BDA HEATER HOSE	PR £69
13 ROW OIL COOLER	£65
ANTI VIBRATION ALLOY MOUNT BRACKET	£40
PINTO ENGINE HOSE KIT	SET £110
VAUHALL TOP + BOTTOM HOSE	PR £80

NEW PRO FIA 3IN SHOULDER 2IN LAP STRAPS WITH REINFORCEMENTS Q/R "THE BEST SELLER"

4 POINT Q/R	£100
5 POINT Q/R	£105
6 POINT Q/R	£110
CLUBMANS 2IN 3 POINT	£44
CLUBMANS 2IN 4 POINT	£49

TRS TOTAL HARNESSES FIA APPROVED MAGNUM 75MM 3IN STRAPS Q/R

4 POINT Q/R	£118
5 POINT Q/R	£126
6 POINT Q/R	£130

ALL COME WITH FIXING EYES, ALL COLOURS AVAILABLE.

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SUZUKA PRO GT LARGE GRP	
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MONACO PRO STEEL FRAME	
	£180
ALLOY SIDE MT SEAT FRAME KIT	
	£50

TRS HELMET HAMMOCK MESH	£31
NAV MESH MAP POCKET	SMALL £10
	LARGE £12
AVANTI MAP LIGHT	£30
TWIN HELMET BOX	£50
PIPERCROSS AIR FILTER TWIN BOX BDA PINTO X-FLOW, ETC	
	£92

* CABLES & LINKAGES *

TWIN CABLE WEBER ALLOY	£60
TWIN CABLE DELLORTO STEEL	£50
THROTTLE CABLE 1 METRE	£5
THROTTLE CABLE 3 METRE	£6
RS2000 CLUTCH CABLE	£16
RS2000 HEAT SHIELDED CLUTCH CABLE	£24
RED PULL CABLE 6FT	£10
RED PULL CABLE 12FT	£12
RALLY ESCORT T-SHIRT	£15
RACETEC 8000 RPM TACHO	£130
STACK ST200 10500 RPM TACHO	£240
TERRATRIP 303 PLUS C/W REMOTE HEAD DISPLAY	£295
TERRAPHONE CLUB INTERCOM	£96

* SEALED HIGH OUTPUT BATTERIES *

RT25 182x77x168mm	£115
RT30 250x97x156mm	£155
RT40 250x97x206mm	£175
RT35 ANTI VIBRATION	£130
PC680 ANTI VIBRATION	£78
PC925 ANTI VIBRATION	£120
MK1 ESCORT LAMINATED WINDSCREEN	£75
MK2 ESCORT LAMINATED WINDSCREEN	£75
MK1 ESCORT HEATED WINDSCREEN	£225
MK2 ESCORT HEATED WINDSCREEN	£220

POLYCARB WINDOW KITS CLEAR OR BRONZE

MK2 ESCORT 7 PIECE KIT	£200
MK2 5 PIECE KIT WITH SLIDERS	£220
MK1 ESCORT 7 PIECE KIT	£295
MK1 5 PIECE KIT WITH SLIDERS	£330

BODY PANELS FORD ESCORT MK1 & 2

MK1 FRONT WING	£88
MK2 FRONT PANEL	£97
MK2 DOOR SKIN	£76
MK1 FRONT PANEL	£65
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THIS IS JUST A SMALL SELECTION OF PANELS AVAILABLE. FULL RANGE IN STOCK.	

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MK2 ESCORT SHAPED DOOR BAR	EA £45
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PINTO ELECTRONIC DISTRIBUTOR KIT	£285
X-FLOW LUCAS ELECTRONIC DISTRIBUTOR	£195
LUCAS IGNITION MT PANEL	£40
ZF INPUT SHAFT AND 5TH GEAR	£470
ZF DIRECT TOP BRONZE SELECTOR FORKS	
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ALLOY INJECTION FUEL FILTER	£57
OMP CORSICA SWEDE STEERING WHEEL	£140

OMP MK2 S/WHEEL BOSS	£40
MK2 POWERSTEERING KIT	£850

MINTEX BRAKE PADS M144

AP MONTE CARLO (1201)	£74
AP FOREST FULL PAD (1864)	£63

DUNLOP TYRES 13IN, 14IN, 15IN, 16IN AND 17IN TARMAC RALLY MOULDED PATTERN

200/530-13 X22-X08 (215/45)	£150
235/530-13 X22-X08 (225/45)	£160
200/585-15 X22-X08 (215/45)	£173
220/585-15 X22-X08 (225/45)	£175

FOREST TYRES 13IN AND 15IN

165/80-13 SP85	£109
165/80-13 SP61	£122
185/70-13 SP85	£114
195/70-13 SP82	£130

A SELECTION OF TYRES IN STOCK

NEW FIBREGLASS PRODUCTS

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BONNET WITH INTERNALS	£125
BONNET CARBON LAYER INTERNAL	£210
BOOT LID PLAIN MK1 AND 2	£90
BOOT LID CARBON LAYER, INTERNAL	£170
BOOT LID WITH SPOILER, MK2	£145
RS2000 MK2 NOSECONE BONNET	£148
MK1 WORKS BUBBLE ARCH	SET £95
MK2 ALLOY PATTERN ARCH	SET £95
MK2 FOREST 76 SPEC ARCH	SET £95
RS1800 BOOT SPOILER	£40
RS2000 CARBON BOOT SPOILER	£85
MK2 REAR BUMPER	£34
KEVLAR	£44
MK2 QUARTER BUMPERS	£44
KEVLAR	£62
MK1 REAR BUMPER	£39
MK1 F/G CHROME QUARTER BUMPERS	£88
MK1 TWIN COWEL DASH TOP, LATEST ORIGINAL LOOK	£110
MK1 WORKS CENTRE CONSOLE	£74
MK1 6 DIAL DASH TOP RH OR LH	£85
BATTERY BOX	£30
RT30 BATTERY BOX	£45
CARBON LOOK	£53
CARBON CORNER ARCH GUARDS, MK2	PR £50
MK2 CARBON DOOR MIRRORS	PR £130
CARBON ROOF VENT	£170
MEXICO MK2 FRONT SPOILER	£45
MK2 NAVIGATORS DASH POD	£55
MK2 FULL SIZE UNDER FLOOR KEVLAR GUARDS	PR £435
MK1 SAFARI ROOF VENT KIT	£160
MK2 CARBON DOOR CARDS	PR £115
MK2 CARBON INNER QUARTER PANELS	£94

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6 X 13	£115
7 X 13	£125
8 X 13	£130
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6 X 14	£130
6 X 15	£140
7 X 15	£145
8 X 15	£155
9 X 15	£170
8 X 16	£200
8 X 17	£200
8 X 18	£200

* PRICES INCLUDE VAT *

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MODELLERS CORNER

The world of scale models is bigger than you might think, but not just for box fresh beauties – they're also getting modified, too.

✂ CHRIS POLLITT 🛠 BRADLEY MONROE

W

We love a model car here at PF. Our Ed has hundreds of them, but then again, he is a bit special. However, a recent post on the PF Facebook page revealed that he's not alone in his love for Fords of a more 'lightweight' disposition; turns out you lot are, too. This led us onto the talented Bradley Monroe, who promptly sent us some examples of his work. If, after this, you're not clicking eBay links like mad in a bid to get your hands on some models of your own, you're crazy!

Bradley is, somewhat annoyingly, only 15 years old. We have nothing against teenagers, we're just a bit miffed that we didn't have that much talent at his age. All we could do was watch MTV and ask our mum to wash our socks. Bradley, on the other hand, can create miniature automotive masterpieces.

It all started for Bradley with some Tipp-Ex and a Matchbox Escort Cosworth. Unhappy with the finish offered by the toymaker, Bradley opted to change it. It's a passion that's stuck with him, because he now owns over 40 1:18 scale Escort Cosworths!

Those are for Bradley's own enjoyment though. For others, the years spent pulling models apart and rebuilding them has resulted in him being able to offer a service that gives Ford fanatics and proud owners alike the opportunity to commission a custom model, be it of a fantasy build or their own car.

Using photos, a vast selection of spares and a keen eye, Bradley can happily recreate most cars as long as there's a decent base model to begin with. Be it 1:43, 1:18 or something else, his skilled hands can miniaturise and apply all manner of mods to make the perfect shelf-dwelling ode to the car in the garage.

Such are his skills, in 2012 it actually turned into a bit of a business. But then again, considering he goes to shows and uses the parcel shelf of his Dad's Imperial Blue '95 EsCos as a display case, it's not hard to see where the popularity came from. Add into this the power of Facebook (search for Monroe's Diecast Models) and the young entrepreneur was onto a winner.

Today he's still going strong with the orders flooding in, because deep down, we all like the thrill of a highly detailed scale model, but when it's a model of your own car or your fantasy build, and it's the only one of its kind, well, that's something even more special.





Got a collection yourself, or have you built some custom models that you want to shout about? If so, just drop us a line and we'll get you in the magazine. Be it static, R/C or otherwise, it's of interest to us. Get it over to chris@projectviva.co.uk.



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PF ASKS ...



Social media is a wonderful thing, and you lot are always there, ready to chat to us. Each month we're going to be asking questions about your Ford-filled lives.

Stay tuned to www.facebook.com/PerformanceFordMagazine for your chance to be on these pages!

Performance Ford Magazine
[?] · 18 August at 11:56 · 🌐

So, some bits arrived for our project ST yesterday, including new suspension, brakes and brake lines. That got us thinking. What's the best bit for you? Are you all about the build process, or do you live to see the finished product?



Ryan · 18 August · 🌐

I like adding bits onto my Moor door as I've got a triple r splitter that needs fab work to get it to fit

Like · Comment

11 people like this.

Write a comment...

James · 19 August at 09:42

The build process was by far the best bit for me and planning new parts for my ST. I took it to 400bhp then got it featured in a magazine then I felt it was complete and sold it for a Mk1 RS instead

Like · Reply · 19 August at 09:42

Roy · 19 August at 10:38

Build process all the way 😊

Like · Reply · 19 August at 10:38



Martin · 18 August · 🌐

Thank the s500 has gone as far as it will. Might wrap it next year

Like · Comment

Francisco · 18 August · 🌐

Write a comment...



Roy · 18 August · 🌐

The build stresses me out

Like · Comment

Francisco · 18 August · 🌐

Write a comment...

Kris · 19 August at 06:03

A bit of both. Nothing like taking your car for a good bang after putting power upgrades on

Like · Reply · 19 August at 06:03

Mat · 18 August at 20:40

You missed the stage before the build and the drive. The window shopping for parts, and the purchase!!!

Like · Reply · 18 August at 20:40



Graham · 18 August · 🌐

The LSD made the big more planted.

Like · Comment

Francisco · 18 August · 🌐

Write a comment...

Sponsored by



Alan · 18 August · 🌐

As soon as we added the Image Wheels to big cab we knew they were right. We also like changing the colour as often as we can. 😊

Like · Comment

12 people like this.

Write a comment...

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£3895.96

Peak power: 297.1bhp

Peak Torque: 382.1Nm

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Pumaspeed Quickspool Tubular Manifold	£625.99
MAXD Stage 1 Tuning Box	£399.95
MAXD Stage 2 Tuning Box	£459.00
Milltek Decat Downpipe	£211.99
Milltek Hi Flow Sport Cat Downpipe	£414.36
Milltek Non Resonated Cat Back	£448.00



1.0 Ecoboost

ZS170 Power Upgrade

£1999.99

Peak Power: 167bhp

Peak Torque 210.3Nm

Pumaspeed 1.0 Induction Kit	£145.99
MAXD Stage 1+2 Tuning Box	£399.95
Milltek Decat Downpipe	£202.80
Milltek Hi Flow Sports Cat Downpipe	£505.50
Milltek Non Resonated Cat Back Exhaust	£448.56



ST225

Stage 1 intercooler and remap package

£525.00

Up to 275bhp

Torque: 450Nm

R-Sport Stage 1 Intercooler	£250.00
Pumaspeed Ultimate CAIS	£375.00
Pumaspeed Remap	£289.96
Pumaspeed Tapered Inlet Plenum	£399.00
Milltek 3 Inch Hi-Flow Downpipe	£237.00
Milltek Decat Pipe	£124.74
Milltek Hi-Flow Sports Cat	£548.86
Milltek non-res Cat Back	£498.96
Milltek Ultimate Cat Back	£479.99



ST250

ST295 Power Upgrade

£1995.00

Peak Power: 295bhp

Peak Torque: 350Nm

R-Sport Stage 3 Intercooler	£349.00
MAXD Stage 1 Tuning Box	£399.00
MAXD Stage 2 Tuning Box	£425.00
Milltek Decat Downpipe	£280.00
Milltek Sports Cat Downpipe	£469.99
Milltek non-res Cat Back	£679.99



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- Aluminium top plates
- 30 way adjustable damping
- Adjustable spring platform
- Height adjustable bottom mount
- Bearing mounted spring platforms
- Dust boot to protect damper seals
- High quality body finish
- Springs and accessories available

* features depend on application



EVERY DAMPER DYNO TESTED

Every BC Racing damper is dyno tested in-house. Our coilover kits are only assembled using matched dampers to ensure equal and efficient damping throughout their range.

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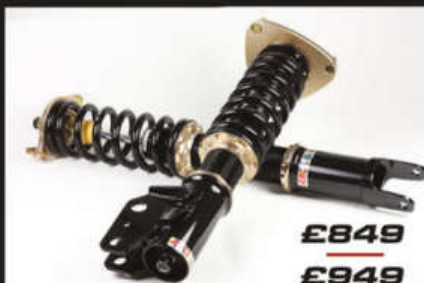
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